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ABSTRACT

This document presents profiles of 21 exemplary New Jersey elementary and secondary school teacher-developed programs and their outcomes. Thirty-nine teachers received two-year grants that allowed them to evaluate their practices and to prepare materials for dissemination. The programs are in the following subject areas: art; career education; computers and technology; English as a Second Language and foreign languages; gifted/special/alternative education; reading, writing, language arts; mathematics and science; social studies; and social and study skills. The profiles indicate the content area and grade level in which the programs were implemented. Each profile also includes information on the following: program overview, program objectives, what the research says about the instructional approach, program effectiveness, special resources, scheduling requirements, how to obtain further information, and bibliographic notes. Indexes list grant recipients for 1988, 1987, and 1986. (JB)

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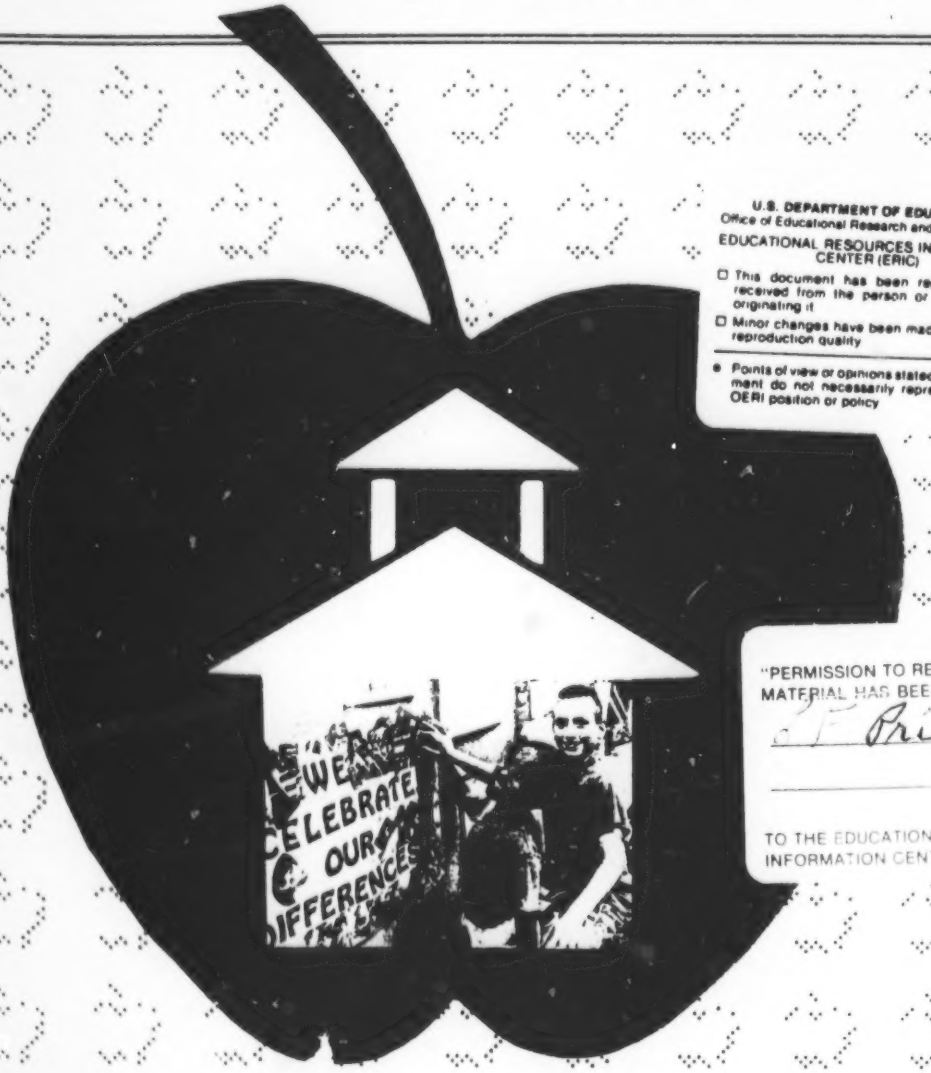
NEW JERSEY

GOVERNOR'S TEACHER GRANT PROGRAMS

1988 Program Overviews



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NEW JERSEY
GOVERNOR'S TEACHER GRANT PROGRAMS

1988 Program Overviews

John Ellis
Commissioner

ERRATUM

The CIP citation inadvertently identifies this volume as Research Division Report #27. It is Research Division Report #28.

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Fall, 1990

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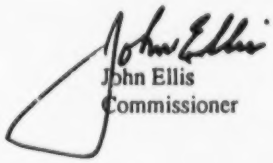
Foreword

Through the Governor's Teacher Grant program, which was established in 1985, New Jersey educators are able both to applaud the initiative of dedicated teachers and to share ideas and effective instructional methods developed by their colleagues in other school districts.

During the past two years, the 1988 Governor's Teacher Grant recipients have used grant funding to evaluate their programs and prepare materials for dissemination to all schools and teachers in the State. In sharing their innovation and expertise, these teachers support efforts of the New Jersey State Department of Education to improve the quality and effectiveness of instruction and thereby to enhance student learning.

Profiles of these programs and their outcomes are presented in this document in order to acquaint educators with this rich source of teacher-developed instructional practices. We are grateful for these efforts, which ultimately benefit our young people.



John Ellis
Commissioner

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Introduction

The New Jersey Governor's Teacher Grant program, which was established in 1985, has a dual purpose:

1) To recognize teachers who have developed programs and practices that have proven effective in promoting student learning, and

2) To share these teacher-developed ideas and methods with teachers and other educators throughout the state.

The programs described in this document result from the dedication of the 39 recipients participating in 21 two-year grants awarded in 1988.

The profiles that follow provide only a brief overview of the efforts of these teachers during the last two years to evaluate their practices and to prepare materials for dissemination to interested districts statewide. The profiles have been prepared according to a consistent format that indicates the content area and grade level(s) in which the programs were implemented. Although some may use these indicators to locate programs designed specifically for their own grade level and content area, readers are encouraged to examine the descriptions of other programs, as well. They may find a wealth of useful ideas and methods in programs throughout the catalog.

Each profile that follows includes information on the following:

Program Overview - a description of the students, the classroom activities, the teacher's instructional approach, and the course content.

Program Objectives - often a statement of both short- and long-term goals.

What the Research Says - a summary of research findings that support this particular instructional approach.

Program Effectiveness - a description of the kinds of assessments used to evaluate the program, along with program results.

Special Resources - a listing of the equipment, materials, staffing, and space that may be required to implement the program.

Scheduling Requirements - a statement of the kind of scheduling needed to implement the program.

Further Information - the name of the individual(s) to contact to obtain more information or to order a copy of the complete program packet (including a program description, teacher materials, and student materials).

Notes - bibliographic information on the research cited.

Following this material is an alphabetized index of the 1988 recipients and the page number where their program profiles can be found in this catalog, as well as an index both for 1986 and 1987 recipients and programs that are available for replication. People interested in finding out more about any of the programs named in this document should contact districts directly.

The Artist of the Month Program

DEVELOPED BY: Marie Cataffo

PROGRAM OVERVIEW

The Artist of the Month Program, which is designed to foster cultural and visual literacy and critical thinking, provides K-5 students with a balanced art program of art history, appreciation, aesthetics, and art production. Intended as a supplement to a production-based art program, this comprehensive approach helps students develop the ability to perceive, understand, analyze, interpret, and evaluate visual form in order to increase their ability to respond to ideas, experiences, and the environment through language and artistic expression.

Each unit of study, consisting of 4-5 sequenced lessons, focuses on an artist or period of art and specific elements and principles of art demonstrated in the works or period being studied. The lessons provide a variety of activities related to the particular unit, including observation of art work, discussion of that work, and the production of students' own art work.

Every month, the new unit of study is announced in the school bulletin, as well as in a note which students take home to their parents; and parents and students are encouraged to bring in material for display or for use in the production of original art. In addition, second- through fifth-grade students are required to keep a notebook in which worksheets and all other information are kept.

PROGRAM OBJECTIVES

Participants in the program will become aware of and understand that artists reflect and respond to the world around them in a variety of ways and will develop a vocabulary and an ability to judge works of art and the surrounding visual world. In addition, students will develop ideas for expression in their own artistic production.

WHAT THE RESEARCH SAYS

Dobbs (1988) provides an anthology of research tracing the evolution of discipline-based art education. Jerome Bruner's *Process of Education* (1960) is credited with providing the impetus for change toward structure and conceptual content in curriculum development; the Pennsylvania University Seminar in 1965 is identified as having served as a forum for art educators debating the merits of a discipline-ordered approach to curricular development; and Eliot Eisner (1968) at Stanford University is recognized for his two-year project, which resulted in the Kettering Curriculum, an elementary art program encompassing art history, criticism, and production.

Since that time, Eisner (1988, 1982) has emphasized the need for four curricular strands in art education to include the things that people do with art: make it, appreciate it, understand it, and make judgments about it. He states that these four need to be taught in relation to one another and to students at every level. Eisner's work, along with that of other theorists and authors including Howard Gardner (1985), Ernest Boyer (1988, 1985), and Harty Broudy (1987), contributes to and supports what has been labeled discipline-based art education.

Curricular models have developed from this research. The J. Paul Getty Trust has established the Getty Center for Education in the Arts, which has supported discipline-based art education in seven Los Angeles schools; and a curriculum based on similar goals has been implemented in the Virginia Beach Public Schools for over ten years.

Recently, two additional reports indicate the drive toward comprehensive arts programs on the national level (National Endowment for the Arts, 1988) and in our own state (Literacy in the Arts Task Force, 1989). Both call for a curricular framework and student assessment, and they are specific as to the need "to introduce students to the full range of arts experience - both as senders and receivers" (Literacy in the Arts Task Force, 1989, p. 13).

PROGRAM EFFECTIVENESS

Unit tests and student and parent attitudinal surveys were used to evaluate the program formally. The test results indicated enhanced student learning in the content knowledge acquired by the students.

A comparison of pre- and post-attitudinal survey results, as well as a comparison of the post-survey results with those of a control group, showed significant improvement in attitudes toward viewing art, discussing art, expressing one's feelings about art, and producing art.

Moreover, parents are supportive of the program as was evidenced by a large and positive response to all questions.

SPECIAL RESOURCES

No special resources are required beyond an art room, the library, and a teacher knowledgeable in art and art history.

SCHEDULING REQUIREMENTS

The program is implemented in one regularly scheduled weekly 45-minute lesson.

FURTHER INFORMATION

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NOTES

Boyer, E. (1985). Art as language: It's place in America's schools. In *Beyond creating: The place for art in America's schools*. Los Angeles, CA: Getty Center for Education in the Arts.

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Islamic Art, Geometry, and Computers

DEVELOPED BY: Kathleen Doherty

PROGRAM OVERVIEW

All seventh-grade students of the Red Bank Middle School, including bilingual, gifted, and handicapped students, have successfully participated in *Islamic Art, Geometry, and Computers*. This interdisciplinary program begins with a short filmstrip on the history and culture of Islam and the effect of these on its believers artistically, followed by discussions in which students may also consider some of the political effects of Islam. Next, through the medium of color slides, students study the geometry of Islamic designs, which they explore further on their own by drawing simple shapes, such as triangles, hexagons, stars, and squares, using only a straight edge and compass. Later, students use examples and geometrical principles from Islamic art to create increasingly complex geometrical designs with a compass, protractor, and straight edge.

As students draw the shapes and Islamic designs, they also study the effect of color on the designs by coloring them with markers. The students then view the work of the entire class, analyzing and discussing the effect that color has had on each design. The students' own work with designs and color leads to a study of modern artists who work with color and geometric design, and in turn, to a study of optical art and design. As they analyze and draw these optical designs, students begin to develop knowledge of angles and skill in using the protractor to reproduce them.

Students then write their own LOGO programs, which enables them not only to reproduce the designs they have created with a straight edge and compass, but also to generate new designs using the computer. These experiences enable students to discuss with firsthand knowledge the connection between the tools and the designs they have created.

PROGRAM OBJECTIVES

At the close of the program, each student will understand the influence of Islamic society upon Islamic art; using straight edge and compass, draw a triangle, hexagon, square, star, star/hexagon tessalation, star/cross tessalation, and original designs; demonstrate an understanding of color theory; analyze and qualitatively evaluate his or her own work and the work of other students; analyze the work of contemporary artists whose work is concerned with color or optical geometric effects; use his/her knowledge of interior and exterior angles to produce different shapes; program a computer, using the LOGO language to draw a triangle, hexagon, square, star, star/hexagon tessalation, and original designs; and recognize the effect of materials used upon the design created.

WHAT THE RESEARCH SAYS

According to the National Art Education Association (NAEA), "All elementary and secondary schools shall require students to complete a sequential program of art instruction that integrates the study of art history, art criticism, art production, and aesthetics." Through its interdisciplinary approach, this program addresses all four of these components. *Islamic Art, Geometry, and Computers* begins with a historical and cultural perspective of Islamic art. The choice of the art of a non-western culture is consistent with the recommendations of New Jersey's Literacy in the Arts Task Force (1989), Blandy and Congdon (1988), and Zeller (1989).

Art criticism is an essential in the program. Eisner (1987) finds criticism provides children with the opportunity to learn to see and describe the visual world in a special way. Children are taught to expand their perceptual habits and look in a way that will help them see more. The children develop the attitudes and skills necessary to "experience, analyze, interpret, and describe the expressive qualities of visual form" found not only in works of art, but in the world at large.

Along with the disciplines of art history and art criticism, discipline-based art education depends on aesthetics. Gray (1987) suggests that the nature of aesthetics can best be understood when teachers and pupils evaluate and discuss works of art, "consider the work's cultural and historical contexts, and engage in acts of criticism or appreciation."

PROGRAM EFFECTIVENESS

Evaluation focused on four aspects of the program: knowledge of elementary geometrical concepts, knowledge of color theory, analysis of art work, and programming in LOGO. On all four aspects, students performed well. At the outset, students did not know such basic terminology as the names of polygons with up to ten sides, nor could they identify interior and exterior angles. By the end of the nine-week program, they averaged over 90 percent on tests of geometrical terminology and knowledge of geometry as the study of shapes.

To measure knowledge of color theory, student work was evaluated for evidence of contrasting harmonies, related harmonies, the use of warm and cool colors to effect depth, and the use of contrasting and related harmonies to emphasize certain shapes in the drawing. At the outset, their work evidenced little of these. After instruction, however, all student drawings were judged to demonstrate deliberate use of contrasting and related harmonies. To obtain a measure of their ability to evaluate their own drawings, the students were asked to describe and evaluate a drawing both at the beginning and end of the program. These were evaluated on the basis of six predetermined criteria. At the beginning of the program, less than one third of the students were able to meet any of the criteria. At the end, all students met three of the criteria, and between 80 and 90 percent met each of the three remaining criteria.

In an effort to assess their ability to draw geometric figures using LOGO, the students were given a list of ten geometric drawings to reproduce on the computer. All were able to use LOGO to draw the first eight figures. On the most difficult (the star/hexagon tessalation), only 14 of the 22 students were able to complete the task. However, it should be noted, too, that seven of the eight who were not able to complete the most complex task were special education students who had been mainstreamed from self-contained classes. It should be noted, too, that these same special education students had done very well in all parts of the program except the most complex portion of the computer programming component.

SPECIAL RESOURCES

In addition to basic art room supplies (including compasses, rulers, protractors, and markers), the following are essential to implementation of the program: student access to computers with LOGO software; *The Mathematics of Islamic Art* packet published by the Metropolitan Museum of Art; and a slide projector.

SCHEDULING REQUIREMENTS

Islamic Art, Geometry, and Computers, originally developed as a nine-week course, with students meeting in five 42-minute periods each week, has been offered successfully in three 42-minute periods per week for nine weeks.

FURTHER INFORMATION

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NOTES

Blandy, D., & Congdon, K. G. (1988 Summer). Community-based aesthetics as exhibition catalyst and a foundation for community involvement in art education. *Student Art Education*, 29, 243-9.

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Finding Your Future

DEVELOPED BY: JoAnn Gainer

PROGRAM OVERVIEW

Finding Your Future was created to produce a series of sample videotapes that would provide students and counselors with career information and positive role models for career direction. Fifteen interviews covering a broad range of careers were videotaped - for the most part, on location - in order to give the young people who would view the tape a more realistic view of each career and the working conditions of the person interviewed.

Students participated in every stage of the process: contacting the individuals to be interviewed and handling the arrangements; conducting and filming the interviews; and assisting in the editing of the tapes. A professional film editor provided an introduction to the tapes.

Each tape is accompanied by printed material detailing schools in New Jersey that offer the advanced education needed for each career. Also included is a list of the advantages and drawbacks for each career. In addition, the printed material that accompanies the program description provides a detailed outline that can be used by high school teachers to teach students to produce career videotapes for their own schools. The outline includes basic vocabulary, instructions for training students to use TV cameras and camcorders, suggestions for helping students develop interview questions, sample tests, and evaluations.

PROGRAM OBJECTIVES

The primary objective of this program is to demonstrate that videotapes can be used effectively to provide positive role models for high school students seeking information concerning careers. The secondary objective is to furnish a basic course in television production that can be used by high school teachers to teach their students to make career videotapes for their own schools.

Both that portion of the program dedicated to basic television production and that allocated to students' use of the career tapes have been implemented with heterogeneous groups of high school students.

WHAT THE RESEARCH SAYS

Pridiger, Roth, and Noeth (1977), in an attempt to assess and summarize core aspects of career development among young people in grades 7-9, found that while young people want more career information, they lack knowledge about the world of work and the career planning process. For disadvantaged youth, the picture is even bleaker. Disadvantaged youths suffer not only from a lack of knowledge about careers, but also from a low expectation that their lives can be different from what they already are. Reardon and Burck (1975) point out that it is vital to improve young people's self-image if they are to be encouraged to strive for a better life. It is also important that career education be action-centered and experience-oriented if it is to be effective with young people in today's world.

Educators have frequently suggested that television can be an effective way to supply up-to-date information and to foster in young people the attitudes and skills they need (Galligna, 1970). Costello and Gordon (1965) state that television is one educational instrument that can help students keep up with changes, no matter how rapidly these occur, and to learn the information that they need to take control of their own destinies.

Because of the receptive attitude young people have toward television, they can learn many essential skills in learning to make videotapes. Comstock, Chaffee, Kutzman, McCombs, and Roberts (1978) report that more than 100 experiments have demonstrated that young people can acquire behavior by observing it portrayed on television. Boyd (1977) shows

that videotapes are an effective medium for helping increase the self-concepts of handicapped children. Charren and Sandler (1983) state, "A young person who has helped design, script, produce, direct, film, and finally show a television program has learned many valuable skills."

PROGRAM EFFECTIVENESS

Ten of the completed videotapes were used to evaluate this project. A total of 213 students in ten different groups (varying in size from 20 to 27) were selected for participation. Since the purpose of creating the videotapes was to provide information and role models not only for students who plan to go to college, but also for those who do not intend to go on for advanced education, students in general English programs and students enrolled in career orientation programs (COE and WECEP) were included in the sample, as well as students from honors English and regular English classes.

Each group was given a pretest that included 44 questions pertaining to the career explored in the videotape. The questions included the following general topics: working conditions, salary, potential for advancement and for earning a high income, potential for personal satisfaction, educational courses in high school that could be helpful, advanced training period required, and licensing requirements. After taking a pretest on a given profession, students viewed the videotape related to that profession. Results of a posttest administered to measure the information gained from each tape indicated that students' knowledge of careers improved. Gains in knowledge after viewing a tape ranged from 11 to 39 percent, with an average gain of 16 percent for all groups.

SPECIAL RESOURCES

To implement that portion of the program during which students make their own local or supplementary tapes, teachers will need such equipment as a camcorder, lights, and a video cassette recorder.

SCHEDULING REQUIREMENTS

The original tapes were produced by students as part of a year-long basic course in television production. However, the time required for viewing each of the 15 career information tapes already prepared amounts to only 15 to 20 minutes per segment.

FURTHER INFORMATION

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NOTES

Boyd, C. (1979). *Kahn du! A successful model through television for career education of handicapped children.* Final project report. Washington, DC: Office of Career Education.

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Integrating Computer Technology into the Elementary Curriculum

DEVELOPED BY: Edward K. O'Connor

PROGRAM OVERVIEW

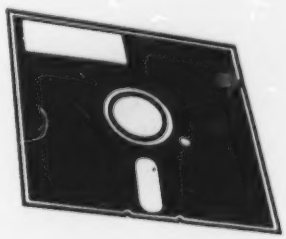
This program, which explores new ways to tap the potential of the computer in an elementary classroom, is infused into all aspects of the curriculum: computation; writing of reports; research; and problem solving. It is successful at this level because it enhances the existing program without infringing on the teacher's and students' already full day.

Integrating Computer Technology into the Elementary Curriculum allows children to use technology to learn actively in ways that paper and pencil could never hope to achieve. It clearly demonstrates the wealth of interactive resources that are offered by computer and provides learners and teachers, which we all are, with a context in which to approach the computer as a learning tool.

Using computers with electronic bulletin boards, laser disk players, telecommunication networks, VCRs, and interactive videos, students learn by acting the role of the scientist, writer, mathematician, programmer, architect, and engineer. They use the computer daily to present dynamic visual models of key ideas, to gather and display data, and to construct and manipulate screen objects and robotic devices which they build and program. Equally important, as they learn valuable problem-solving and critical-thinking skills, they provide the teacher with a window on their thinking and learning.

PROGRAM OBJECTIVES

Student participants, in addition to becoming skillful in the use of computer technology, will develop basic skills; exhibit increased motivation, productivity, and creativity; improve problem-solving abilities; and become more active participants in their own learning.



WHAT THE RESEARCH SAYS

Several major national reports on education identify a need to increase and improve the use of computer technology in our schools (Commission on Pre-College Education, Mathematics, Science and Technology, 1983; National Commission on Excellence in Education, 1983; and National School Boards Association, 1987). While evidence that computers are a permanent classroom reality is mounting, surveys reveal that many problems exist *(Education Week*, 1987). A hesitancy to try the innovative is keeping schools from tapping the computer's potential to radically advance the instructional process.

Time for Results (National Commission on Excellence in Education, 1986) endorses extensive use of computer technology to help bring about broad-based school improvement. This endorsement reiterates the recommendations presented in *Educating Americans for the 21st Century* (Commission on Pre-College Education, Mathematics, Science and Technology, 1983), which advocates earlier and increased computer exposure for all children and specifies more effective computer instruction as a top priority in grades K-6. Echoing this idea, the National Council of Teachers of Mathematics in November, 1987, urged a greater reliance on computers in all grades, noting a striking correlation between student achievement in mathematics, science, and technology and early exposure to motivating instruction and good learning habits in these fields.

The Center for Research into Practice has found that computer instruction is most effective when fully integrated into the curriculum (1987). Its analysis of 169 research studies indicated that computers are an effective teaching tool and that the students' active involvement in learning greatly improves the likelihood of achieving objectives since 85 percent of class time in traditional classrooms is consumed by teacher lectures, with students assuming a passive role.

PROGRAM EFFECTIVENESS

Forty-three students were included in the assessment of this program. Instruments used to provide data include: Iowa Test of Basic Skills; a student survey; classroom observations; student interviews; and teacher comments.

Iowa Test of Basic Skills scores (problem solving, total math) showed no significant gain from the end of grade two to the end of grade three before the program intervention. After the program intervention, the same matched sample of 35 students showed a significant increase (10 or more NCEs) in scores in problem solving and total mathematics.

A student survey showed an increase in the variety of tasks and the number of subject matter areas for which the computer was used. On the basis of classroom observations and student interviews, an independent evaluator concluded that students were interested and motivated in their work with the computer; and they exhibited pride in the work they accomplished with the aid of technology. The students' behavior was also more interactive, with students listening to one another and respecting the ideas and opinions of their peers.

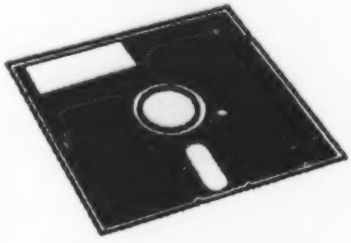
SPECIAL RESOURCES

The only requirement for this program is the availability of computer hardware and software and a teacher skilled in their use.

SCHEDULING REQUIREMENTS

Although students work at the computers every day, the amount of time required varies with the activity.

Certain activities are individualized and have students spending 20-30 minutes per day working alone at the computer while the remaining students work at their desks; other activities are group-oriented and thus permit several students at a time to work together at the computer.



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NOTES

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Elementary Computer Literacy

DEVELOPED BY: Lauren Twarog and Elizabeth Bagish

PROGRAM OVERVIEW

Elementary Computer Literacy is designed to help students develop and expand logical problem-solving skills and technological competency, as well as to utilize the computer as a tool for enhancing their learning. Students participating in the program use the computer two periods each week. One period is dedicated to computer instruction with a specialized teacher who explains the "how to" of the computer, the other to work in a particular content area.

Implemented in grades 1-6 classrooms, with an average class size of 23, this program acquaints students at every level with a variety of computer functions. In *Elementary Computer Literacy*, students work with six general types of software: curriculum-oriented, keyboarding, problem solving, word processing, data base management, and programming (LOGO and BASIC). Curriculum-oriented software allows students to learn and reinforce academic skills in a highly motivating context. Problem-solving software encourages participation in higher-level skills, such as comparing and contrasting, controlling variables, predicting outcomes, justifying response, planning, and identifying patterns. Data base, word processing, and programming software develop highly marketable "real-life" skills and enhance student performance in academic areas, enabling students to practice research skills; write, rewrite, edit, and publish reports, stories, and poems; and explore creative and logical thinking as they work with geometrical concepts, spatial relationships, and problem solving.

PROGRAM OBJECTIVES

Students will be able to recognize, understand, and use computer terms; demonstrate proper care and handling of the computer and computer-related materials; use the computer keyboard; interact with the computer as a learning tool; identify the basic operation of the computer system; develop logical thinking and problem-solving strategies needed to interact with a computer, including programming skills; recognize the impact of computer technology (and the ethics of using it) on society and on students; and recognize how computer technology is used by individuals and in various careers.

WHAT THE RESEARCH SAYS

During the last decade, researchers have studied the effects of computers on learning. According to Papert (1980), "We are learning how to make computers with which children love to communicate. When this communication occurs, children learn....This learning becomes a natural process." Becker (1986) indicates that schools and teachers are becoming more dedicated towards utilizing computer technology to reach specific learning goals. The longer schools have computers, the more teachers use them. In general, teachers perceive that not only have computers improved the learning climate, they also have increased student productivity.

The Office of Educational Research and Improvement (1986) surveyed 2700 teachers concerning their attitudes toward the computer, and Becker (1986) conducted a similar survey with some 8000 subjects. Both studies found that teachers feel computers enrich and challenge high-ability students. Becker stated that teachers see an increase in opportunity for these students, particularly in the areas of programming and other higher-order thinking and writing skills. Both studies also found perceived growth in student motivation, and teachers in Becker's study felt that student cooperation and independence were increased. In addition, teachers in Becker's study indicated that the computer affords more opportunities for low-ability students to master basic skills.

Children within any age group may learn a number of important skills using the computer as a tool. Seymour Papert (1980), who created the LOGO language, states that, "In the LOGO environment the child programs the computer. And in teaching the computer how to think, children embark on an exploration about how they themselves think." Karkoff and Bowman (1983) indicate that the computer "may enhance the development of memory patterns and sequencing and serve as a tool for thinking and problem solving."

As students work and share ideas, they also experience a positive learning environment. "At a social level, it (the computer) may stimulate interactions, providing an impetus for young children to share discoveries and help peers" (Ziajka, 1983). In a computer lab environment, students work together and share their knowledge for problem solving, whether that problem be from a computer-assisted instruction software package, a program which the student writes, or the student's own written work done with a specific word processor or data base.

PROGRAM EFFECTIVENESS

Evaluation of the program focused on word processing skills in grade four, keyboarding skills in grade five, and use of a data base management program in grade six. Approximately 200 fourth-grade students were assessed on their ability to use Bank Street Writer with both a multiple-choice test and a hands-on assessment after four 45-minute periods of instruction. Ninety percent scored 75 points (out of a possible 100) or above, and 50 percent scored 90 points and above. Similar results were found on the hands-on assessment in which students had to demonstrate various skills of typing, editing, saving, retrieving, and printing. Again, 90 percent scored 75 points and above. A fifth-grade group of approximately 175 students was assessed on their keyboarding skills. The students' rates were recorded during a first session on the home row keys. During the next four weeks, the students used the typing drills on the MECC Typing Primer. When the typing rates were again recorded, 75 percent had increased their scores by five words per minute or more. After two periods of instruction, approximately 200 sixth-grade students were assessed on their ability to retrieve, sort, and select through a data base on the U.S. presidents to answer ten questions. Ninety-five percent were able to answer at least half of the questions, and twenty percent answered at least nine of the ten questions correctly.

SPECIAL RESOURCES

The program has been implemented in five elementary computer labs, with each housing 12 computers, a shared printer, and a substantial software library. This program has also relied on a computer specialist to provide computer instruction and to coordinate the computer laboratory.

SCHEDULING REQUIREMENTS

Elementary Computer Literacy is a bi-weekly program with two 30-minute sessions for students in grades 1-3 and two 45-minute sessions for students in grades 4-6.

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NOTES

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Project EXCELL: Experiences on Computers for English Language Learners

DEVELOPED BY: Suzan Cole, Wilhelmina Uhl, Katherine Cooner, and Susan Grant

PROGRAM OVERVIEW

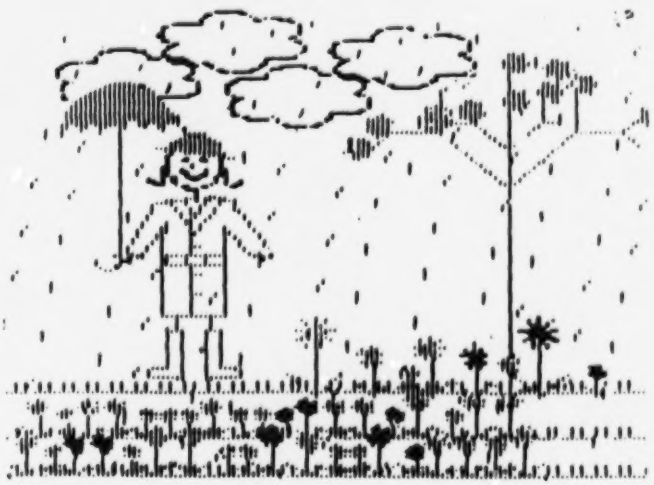
Project EXCELL enhances language acquisition for ESL students through the use of LOGO-based software that serves as a supplement to their regular ESL lessons. Original teacher-developed disks for beginning, intermediate, and advanced students have been designed not only to introduce, reinforce, and enrich specific areas of vocabulary and grammar, but also to motivate students to communicate, to experiment, and to utilize their own capabilities for solving problems.

All disks begin with a visual introduction to the vocabulary. When the student types a word at the prompt, a colorful picture of a scene or object appears on the screen. Learning is reinforced when the student actually uses the words to create a personal computer graphic or to play one in the series of computer word games.

In this classroom, activity rather than passivity reigns as students work in pairs, in groups, or independently. Students come to know that learning is fun and experimental as they interact and relate to each other, sharing their discoveries.

PROGRAM OBJECTIVES

Students participating in this program will develop positive attitudes toward themselves, school, and their ability to communicate effectively in English. In addition students will identify articles of clothing, seasons, weather, and holidays and write grammatically correct sentences about these categories; use the LOGO language to create new graphics; load the program, retrieve each segment, and make hard copies without teacher assistance; and as their proficiency in English increases, become resource persons for monolingual peers by instructing classmates on the use of the "Clothes for All Seasons" program.



WHAT THE RESEARCH SAYS

"Computer-assisted language learning (CALL) represents exciting possibilities in the field of second language acquisition" (Jamieson & Chapelle, 1984, p. 1). However, Hope, Taylor, and Pusack (1984) warn that to be pedagogically sound, CALL software programs must rely heavily on the input of language teachers. Sampson (1986), among others, has been disturbed by the fact that much of the available software is promoting passive learning. LOGO, a computer program with its own language, is a striking exception. Developed in the 1960s by Seymour Papert, LOGO is based on Piaget's theory that a child learns spontaneously by encountering and manipulating the environment (Thornburg, 1986). With LOGO, even very young children can take the initiative and begin to program a computer.

LOGO has also been found to be "a powerful programming language for the manipulation of natural language" (Phillips, 1986, p. 6). Because it uses common English words for commands and graphics, LOGO is an ideal tool for making input comprehensible to LEP students, putting even the beginners in control and enabling them to grasp vocabulary and develop a sense of the written work quickly (Makins, 1982).

In addition, LOGO has been found to have affective benefits. Reggine (1983) reports that with LOGO, the computer can be used to create a learning environment where the student's linguistic and cultural identity are not threatened; and Brounstein (1983) has observed positive changes in peer attitudes towards those classmates who begin to be perceived as computer authorities.

PROGRAM EFFECTIVENESS

Sixty-three ESL participating students were included in the evaluation of this program. Pre- and posttesting included the Woodcock Language Proficiency Battery Reading subtest, holistically scored student writing samples, and teacher-developed vocabulary and spelling tests.

Analyses of the scores indicated that significant gains were realized in reading, writing, and the specific vocabulary taught.

Informal assessment using a teacher-developed questionnaire indicated that the students had gained greater access to computers through *Project EXCELL* and found the activities to be "interesting and different." In addition to recommending the program, these students also responded positively to items that attempted to measure increased pride and self-confidence.

SPECIAL RESOURCES

Implementation of this program requires an Apple 11c, 11e, or GS computer; the LOGO program; and the materials developed for *Project EXCELL*.

SCHEDULING REQUIREMENTS

With most lessons described in the teacher's manual requiring approximately 20 to 30 minutes each, this program can easily be incorporated into a regularly scheduled ESL class.

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NOTES

Brounstein, B. (1983). Computers: A new way of looking at learning. *Educational Horizons*, 62, 30-32.

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Introduction to Foreign Languages

DEVELOPED BY: Norbert Walliczek and Bryce Wnukowski

PROGRAM OVERVIEW

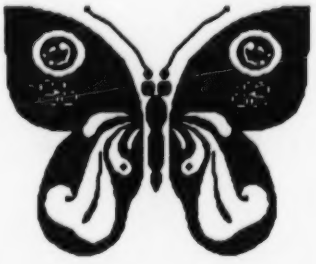
Introduction to Foreign Languages is designed to provide seventh-grade students with a variety of positive language experiences before they commit themselves to the study of one language. The 90-day curriculum is evenly divided into history of language, Latin, German, Spanish, and French.

Included are a word-of-the-day cognate program, drawing and puppet projects, a notebook program, a pen pal program, and seasonal activities in the respective languages. Student projects and cooperative learning techniques further enhance the positive nature of the language experience.

PROGRAM OBJECTIVES

The program is designed to develop:

1. A heightened student interest in languages other than English;
2. An increase of base information on which students can rely when choosing the foreign language they will take in the eighth grade and beyond;
3. An increased student awareness of cultures other than their own;
4. An increased student vocabulary in English;
5. Enhanced student creative abilities;
6. More highly developed student organizational skills; and
7. Greater student interest in writing.



pāpĭlĭo

(Latin)

WHAT THE RESEARCH SAYS

One of the primary needs of young adolescents is to explore possibilities for the future. Rowan and Crawford (1984) support "a gradual move from integrated care to subject specialties over the three years of middle school" (p.18). Kennedy and DeLorenzo (1985) maintain that, "Given the exploratory thrust advocated as a significant component of the middle school curriculum, a program of foreign language exploration can not only help the transescent learner's increasing need to investigate new areas of interest, but it can also be a 'hands-on' experience in the career development process" (p. 5). The natural progression in such an exploratory program is what Hawkins (1984) calls "the trivium of the language curriculum... Mother Tongue/ Awareness of Language/Foreign Language" (p. 37).

Implementation is best achieved through active student involvement in a variety of activities because "transescents are curious to enjoy both intellectual and manipulative acts appropriate to their stage of development" (Maltman, 1983, p. 2).

PROGRAM EFFECTIVENESS

Three teacher-designed instruments were used in a pre- and post-evaluation: a language attitude survey; a language recognition test; and a criterion referenced test. There were significant positive attitudinal changes among the 142 seventh-grade students who completed the language attitude survey. Student scores more than doubled in the language recognition test and almost doubled in the criterion-referenced test.

SPECIAL RESOURCES

This program requires a class set of English dictionaries, a class set of workbooks or teacher-prepared materials for each language taught, individual student binders, and folders for note taking.

SCHEDULING REQUIREMENTS

The program has been implemented in a 40- to 45-minute class period for half a school year. Classes could be scheduled to meet every day or on alternate days.

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NOTES

Hawkins, E. (1984). *Awareness of language.* Cambridge: Cambridge University Press.

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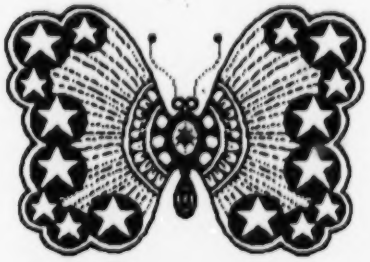
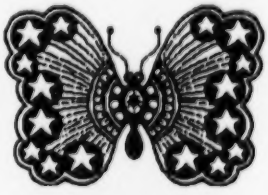


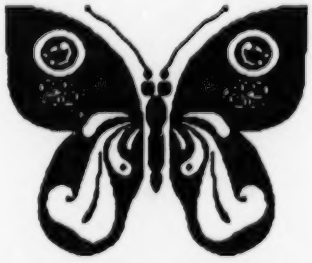
mariposa

(Spanish)



papillon

(French)



schmetterling

(German)

An Enrichment/Gifted Model: Scope and Sequence Grades 1-5

DEVELOPED BY: Marlene Bruther and Margaret Haenni

PROGRAM OVERVIEW

This enrichment program, based on critical and creative thinking skills, focuses on content that is intended to serve as a process vehicle for student product outcomes. The three units that have been developed, Creative Problem Solving, Thinking Skills, and Learning Styles, constitute a scope- and sequence-differentiated curriculum appropriate for use with academically gifted students in a "pull-out," magnet, or regular classroom setting in grades 1-5. The units, which are designed developmentally and sequentially for two elementary levels, Primary (grades 1 and 2) and Intermediate (grades 3 through 5), provide gifted students with a safe environment in which to share thoughts, compare and contrast processes, criticize and evaluate outcomes, and express feelings and attitudes.

PROGRAM OBJECTIVES

The *Enrichment/Gifted Model* seeks to increase student use of critical and creative thinking skills in problem solving and to enhance group cooperation skills. Specific process objectives included in the individual units are: application of the higher levels of Bloom's taxonomy; decision making; brainstorming; metacognition; and use of the creative processes to achieve fluency, flexibility, originality, and elaboration.

WHAT THE RESEARCH SAYS

Lewis Terman's California study (1947) about the characteristics of the intellectually gifted is credited with changing attitudes toward the gifted and introducing a new era of acceptance of the gifted child. E. Paul Torrance (1967) states that creativity, scientific discovery, the production of new ideas, and inventions should not be left to chance. Torrance believes that students should be encouraged to develop their creativity more fully by being exposed to experiences and activities that utilize imaging, analyzing, and synthesizing. Williams (1970) supports Torrance when he states that the thinking processes of fluency, flexibility, originality, and elaboration encourage productivity through the use of knowledge, exploration, and of imagination.

S. J. Parnes' Creative Problem Solving (CPS) Model (1967), with its emphasis on generating a variety of alternative solutions, provides a structured method for approaching problem solving in practical situations in an imaginative way. J. P. Guilford (1972), who has influenced all areas of programming for the gifted (definition, philosophy, identification, testing, curriculum development, and teaching strategies), recommends that educational programs for the gifted concentrate on divergent production, transformation, and evaluation. Renzulli (1982) agrees that gifted programs should be qualitatively different to reflect the diversity of learning styles, teaching strategies, and content appropriate for gifted learners. Renzulli also supports the development of the students' cognitive and affective capabilities through enrichment activities in order to enhance gifted children's capacity to deal with new content and new situations.

Although initially separate taxonomies for both cognitive and affective processes were established and Krathwohl, Bloom, and Masia (1964) provided a method for classifying distinct cognitive objectives according to the level of cognitive complexity required, more recent studies recognize that human behavior is impossible to separate into two distinct domains. Maker

(1982) maintains that affective processes, particularly those related to the value placed on learning, will greatly affect students' motivation to develop higher-order thinking processes.

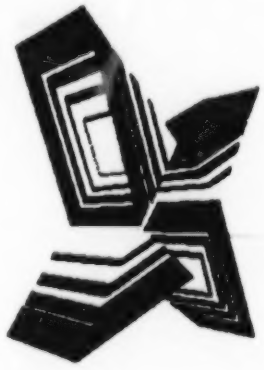
PROGRAM EFFECTIVENESS

Sixty-one participating elementary students were included in an assessment of this program. Instruments used to determine program effectiveness included teacher-made student and teacher surveys and Primary and Intermediate Pre/Posttests for Gifted/Talented Students, tests designed to assess figural and verbal skills areas in fluency, flexibility, and originality.

The student achievement data combined with the teacher evaluation data indicate that this program produces significant gains in student achievement in creative problem solving. Moreover, results of the student survey data also indicate positive program impact. At both the primary and intermediate levels, students showed gains in all six areas of the Primary and Intermediate Pre/Posttests for Gifted/Talented Students; and on five of the six, the gain met or exceeded the predetermined goal.

SPECIAL RESOURCES

Other than the materials developed for this program, no additional special resources are needed for implementation.



SCHEDULING REQUIREMENTS

Implementation of this program requires one 30-45 minute period per week.

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NOTES

Guilford, J. P. (1972). Intellect and the gifted. *The Gifted Child Quarterly*, 16, 175-243.

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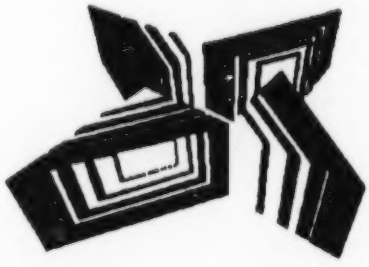

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An Integrated Approach to Teaching Critical Life Skills

DEVELOPED BY: Linda Cole, Linda James, Amy Lessman, Diane Owens, and Lisa Jenkins

PROGRAM OVERVIEW

This program incorporates the basic principles of a functional life-skills approach into a comprehensive educational program for severely handicapped students. The curriculum is derived from the unique demands encountered in the non-school environments in which the students must function - home, work, and the community - and the educational program for each student is planned in concert with the parent.

The skills targeted for instruction are presented within the framework of eight instructional principles or strategies:

- Cross domain teaching addresses the difficulties students with moderate and severe handicaps have with skill generalization and synthesis by enabling them to learn and practice the targeted skill in a variety of activities.
- Age-appropriate contexts ensure that the activities, materials, tasks, and atmosphere correspond to the students' chronological, as well as developmental, age.
- Instructional opportunities are provided not only in the structured lessons, but in the everyday routines and events.
- Naturalistic instruction incorporates the teaching of basic skills within the contexts and activities in which those skills would be needed.
- Functionality is the principle by which skills frequently demanded in typical domestic, vocational, and community contexts - either for survival or for productive and independent living - are targeted for instruction.
- Simulation of materials and settings ensures the closest possible resemblance between the school experience and actual situations encountered in non-school contexts.
- Partial participation is encouraged when a student is unable to perform an entire skill or sequence of skills (routine) to promote further opportunities for learning and expectations for independent participation in other environments.
- Increasing levels of expectation are needed to ensure that skills are fully integrated into the performance of useful activities at the rate and accuracy levels expected in non-instructional settings.

These eight principles or strategies inform the curriculum devised for the nine to twelve students in each classroom. In learning personal maintenance, domestic maintenance, work-related skills, recreation/leisure skills, functional academics, interpersonal communication, and family life, students should leave school as more independent and productive adults, capable of leading varied and enhancing lives and of participating in diverse and heterogeneous post-school environments.

PROGRAM OBJECTIVES

This program strives to see each participating student achieve independent and productive functioning to the greatest extent possible in all environments—home, school, and community.

WHAT THE RESEARCH SAYS

Traditional programs, based on milestone behaviors identified as part of normal child development, have failed for students with moderate to severe handicaps because they do not address the learning differences and needs of these students. Students with moderate to severe handicaps who follow a developmental program fall farther and farther behind their chronological-age peers and approach graduation without the skill repertoire needed to function in complex and heterogenerous post-school environments (Brown et al., 1979). In the mid 1970s, Lou Brown and his colleagues in Madison, Wisconsin, introduced the concept of functional life skills as an alternative approach to the traditional developmental model for students with severe disabilities (Brown et al., 1976). Implementation of such a program involves three major processes: identifying the student's current and future needs; breaking those needs down into teachable parts; and focusing instruction on the acquisition of these steps in the context of natural situations requiring their performance (Bates et al., 1979).

Although most life-skills programs have focused on adolescent or secondary-age students, several research groups have reported successful applications with younger children (Bambera et al., 1988) and pre-schoolers (Vincent et al., 1980). Meyer and Kohl (1985) report success using this approach to teach domestic skills to children at the elementary-school age.

While these reported programs serve a fairly wide range of students, they all follow the same basic principles in their design and instructional methodology (Bambera, et al., 1988). These basic principles are age-appropriateness, natural or simulated contexts for skills instruction, skills instruction within the context of natural routines, functionally relevant settings and activities for instruction in the targeted skill, need-driven curriculum goals, and collaboration with significant others (i.e., parents) on the identification of skills to be targeted. Research shows that a functional life-skills approach provides those students with moderate to severe handicaps with educational programming that is constructive and relevant to their needs.

PROGRAM EFFECTIVENESS

Prior to the start of the program, it was determined that a skill completion rate of 60 percent would indicate program success. Positive student outcomes were determined by calculating skill completion rates on targeted instructional objectives for the 49 participating students included in the evaluation. The mean completion rate was 67.5 percent, exceeding the program goal. Moreover, parents, who were surveyed, indicated positive feelings about the progress of their children.

SPECIAL RESOURCES

Since this program seeks to simulate work and home communities, materials from these environments are needed in addition to adapted teaching tools. For each classroom, minimum staffing includes a teacher and an assistant.

SCHEDULING REQUIREMENTS

The program is continuous and is implemented throughout the school day, as well as by parents at home.

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NOTES

Bambera, L. M., Warren, S.F., & Komisar, S. (1988). The individual curriculum sequencing model: Effects on skills acquisition and generalization. *Journal of the Association for Persons with Severe Handicaps*, 13, 8-19.

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Snack Bar Program

DEVELOPED BY: Kim Hilbronner-Dagen, Tina Johnson, and Patricia Roberts

PROGRAM OVERVIEW

The goal of the *Snack Bar Program*, which services multiply handicapped students in a Special Services School District, is to help students learn some of the functional skills needed for future independence within the community. Skills to be learned through the program include reading and following recipes, clipping and organizing coupons, accurately measuring ingredients, making change for customers at the Friday "store," practicing good health habits, and comparing and evaluating products and results. Participating students attend two 45-minute Snack Bar preparation classes each week. Four groups rotate afternoon classes, attending independent living, socialization, and pre-vocational classes in addition to the Snack Bar preparation course.

Customers for the Friday afternoon Snack Bar are all elementary-aged children in the school. Students schoolwide earn Snack Bar privileges by meeting individual classroom behavior goals tallied weekly.

Every Monday morning a student and teacher from the program visit each classroom to announce the two Snack Bar choices for the week and to record student choices. These records are used to determine the amount of snacks which the class will prepare. Goals are listed and a chart kept for every student in the class as part of an ongoing assessment of student skills and independence.

Through the preparation of foods and operation of the weekly Snack Bar, eight- to eleven-year-olds enrolled in a functional life-skills program experience a highly motivating opportunity to apply functional mathematics, reading, and writing, while learning about consumerism and customer service and developing career awareness.

PROGRAM OBJECTIVES

Students participating in the program will develop and increase their independent living skills, learn the importance of teamwork, interact appropriately with student and adult customers, follow directions, and improve their measurement skills.

WHAT THE RESEARCH SAYS

Before the 1970s, the average curriculum for students with mental retardation was based on infant and child intelligence scales developed and referenced to the normal population (Snell, 1987); and students were expected to master skills sequentially along the continuum. The problem with this approach for students with moderate to severe handicaps was that they could never progress to those skills on the continuum deemed necessary for independent living and competitive employment (Wilcox and Bellamy, 1982).

In more recent years, Public Law 94-142, the Education of All Handicapped Children of 1975, and advocates, such as the Association for the Severely Handicapped, have paved the way for innovative approaches to curriculum development and goal selection for these students. Falvey, Rosenberg, and Grenot-Scheyer (1982) emphasize the need to identify and teach relevant functional skills.

Considering the learning difficulties students with moderate and severe handicaps have in acquiring new skills, it is necessary to teach skills that are needed in both present and future environments (Falvey, 1986). Brown, Nietupski, and Hamre-Nietupski (1976) call this "the criterion of ultimate functioning" and stress the need to plan for future adult environments when selecting goals.

Vocational programs for these students typically begin during the last few years of school, leaving little time to prepare students for the demands of competitive employment (Falvey, 1986; Wilcox & Belamy, 1982) and promoting unemploy-

ment for individuals with handicaps that range between 50 and 80 percent (Edgar, 1987; U.S. Commission on Civil Rights, 1983; Will, 1984). Proponents feel strongly that programs that begin vocational preparation earlier will better enable handicapped students to reach their career potential (Bigge, 1976; White, 1987).

PROGRAM EFFECTIVENESS

The impact of the program on student cognitive development was assessed using the Elsmere Functional Academic Checklist. Three skill areas tested included: counting and numerical identification; computation; and money. Results showed student progress in all three areas, with the greatest gains realized in the development of money skills. In addition, surveys completed by the Snack Bar workers, customers, parents, and teachers indicated student growth in social interaction, self-concept, and improved behavior. Moreover, parents observed that their children helped more at home as a result of the Snack Bar experience.

SPECIAL RESOURCES

Implementation of the program requires typical kitchen equipment: furniture; appliances; cookbooks; and supplies.

SCHEDULING REQUIREMENTS

Snack Bar preparation classes are held four days a week for 45-minute periods. On the fifth day, the Snack Bar is in operation for one hour in the afternoon.

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NOTES

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Project Promise: Model for At-Risk Students

DEVELOPED BY: Idalia Craig, Barbara Comiscioli, Robert Goodstein, and Jan Guthrie

PROGRAM OVERVIEW

Project Promise is a "school within a school" for students who have difficulty functioning and achieving in a traditional high school setting. Eligibility is based on limited academic success due to high absenteeism, learning difficulties, continuous cutting, school disinterest, poor social adjustment, and/or poor self-esteem. Entrance into the program is based on recommendations by teachers and counselors followed by parent, student, and *Project Promise* staff approval.

Project Promise, which offers an alternative environment that is flexible enough to meet the academic, physical, emotional, and social needs of each student, encourages student involvement in classroom activities, a strong sense of camaraderie among the staff and students, and greater opportunity for innovation.

The program includes 30 to 50 students in grades 10-12, three full-time teachers, a teacher-counselor, and an aide. Housed in two small buildings on the high school campus, *Project Promise* offers students a place of their own, as well as easy access to the facilities and services of the main building. Upon graduation, students receive a regular high school diploma and may enter college, a vocational/technical school or seek employment.

PROGRAM OBJECTIVES

The goals of *Project Promise* are to increase a student's satisfaction with school, learning, and self; to improve each student's ability to relate effectively with peers and adults; and to help each student identify realistic goals for the future. Moreover, students should graduate with basic competencies in math, communication skills, and social sciences, as well as career opportunities.

WHAT THE RESEARCH SAYS

Educators who take the problem of school dropouts and failures seriously have long looked to the alternative school for possible solutions. The staff at the University of Wisconsin in their study of nine programs concluded that "carefully designed school interventions with at-risk youth can produce effects that will benefit both students and society" (Wehlege, Rutter, & Turnbaugh, 1987). Wehlege (1983) states that successful programs include a set of variables that address administration and organization, teacher culture, student culture, and curriculum and instruction.

For many students, the most valued characteristic of an alternative program is the family atmosphere (Wehlege et al., 1987; Cuban, 1989), which is possible because of the small size of most alternative schools (Raywid, 1988). Small programs enable staff and students to get to know one another on a personal basis.

Students also view alternative programs as their own. Wehlege (1983) finds that this feeling is fostered when programs are selective, voluntary, and have an admission process. In addition, the academic curriculum must be relevant and designed to promote early and frequent success (Wehlege, 1983; Glatthorn, 1985). The experiential part of the curriculum, the cooperative learning programs, can provide powerful incentives by offering employment opportunities (Wehlege et al., 1987). Small classes, a relaxed atmosphere, and flexible scheduling allow the teacher to direct the curriculum to the student's needs and advantage (Glatthorn, 1985).

PROGRAM EFFECTIVENESS

This program was evaluated over a period of one year with 30 *Project Promise* students. Data included grade averages, attendance and class cutting records, and disciplinary reports. In addition, student, parent, and administrative questionnaires were developed and administered to determine the respondents' attitudes about *Project Promise*.

The results of the study indicate that the program has a positive effect on students. A significant improvement in GPA, class attendance, and discipline was noted. Additional information revealed improved school attendance, motivation, and attitudes, and parent and administrative satisfaction with the program. An analysis of the self-esteem data suggests that while the mean score of the control group saw no change, the mean score for the *Project Promise* students increased.

SPECIAL RESOURCES

Project Promise is designed to be a school within a school, with close proximity to all high school facilities. Implementation of the program requires a full-time staff of at least three or four teachers, as well as a full-time counselor, separate building facilities, and transportation.

SCHEDULING REQUIREMENTS

Project Promise provides four hours of daily instruction in required social studies, physical education, English, and mathematics courses, as well as in electives in business, science, and peer counseling.

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NOTES

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Reading with a Novel Component

DEVELOPED BY: Delores Mawson

PROGRAM OVERVIEW

Reading with a Novel Component, a literature-based approach to reading instruction for students in second through eighth grades, provides class sets of novels and books, with 25 single titles in each collection. The reading is appropriate to the students' interests and abilities, has literary merit, and encourages interpretative discussions. Each student is expected to read a minimum of three books, one of which is teacher-assigned, per marking period.

Innovative packages of study guides and activities which accompany each collection include questions based on Bloom's taxonomy; vocabulary lists; creative activities; research ideas; and suggested media materials, computer programs, and videotapes. Each teacher is encouraged to select from the additional materials, both teacher-developed and commercial products, to promote the reading of good books, to develop and extend vocabulary, to provide experiences for students to think critically, to apply basic literacy concepts to works of literature, and to reinforce basic reading skills.

PROGRAM OBJECTIVES

Students participating in the program should exhibit improvement in knowledge and use of oral and written vocabulary, higher levels of critical thinking, and understanding and use of basic literary concepts.

WHAT THE RESEARCH SAYS

Considerable research in recent years has focused on the quality of reading programs. Many conclude that children, beginning in kindergarten, need a literature-rich environment and ample opportunity to read quality and diverse literature. The core of the reading program should be quality literature because good literature touches the lives of children (Cullinan, 1987).

According to Strickland (1987), the success of a reading program depends on certain basic assumptions. First, students must be given the opportunity to respond with their interpretation of a story based on their experiences and knowledge. Second, trade books and novels offer an excellent channel for higher-level thinking and interaction and need to be read by all students. Third, workbooks and skill work have dominated too much reading time and need to be de-emphasized and replaced with quality comprehension activities. Fourth, analytical writing activities promote critical thinking and need to be correlated with the reading activities.

Recent research (Fielding et al., 1987) indicates that for the majority of children, reading from books occupies one percent of their free time (or less), and only 7-8 minutes a day is spent reading silently in the classroom. To remedy this situation, reading programs should include a strong literature component which can be continued in the home. Just as with so many other activities in life, the more time children put into practicing their skills, the more talented they become at that activity; enthusiastic readers become talented readers (Lamme, 1987).

Too often, reading programs rely on the reading basal, and the greatest amount of time is spent on completing workbooks and worksheets. Analysis reveals that many workbook activities require only a perfunctory level of reading and that children rarely need to draw conclusions or reason on a high level (Osborne, 1984). Smith (1982) has argued, moreover, that skills taught in phonics instruction have little to do with the reading process of skilled readers. Watson (1988) concludes that students need whole stories and whole discussions, not workbooks that ask them to circle the medial consonant.

Writing activities should be integrated into the reading program, and the literature component is a natural springboard for critical thinking and analytical writing. Yet students of all ages have difficulty with analytical writing. A U.S. Department of Education study (Applebee et al., 1986) indicates that even on the easiest task, which asked students to "compare and contrast", only 25 percent of 11th graders, 18 percent of 8th graders, and 2 percent of 4th graders wrote adequate analyses. Most students simply are unable to write adequately except in response to the simplest of tasks.

Reading researchers and literary critics have extended the parameters of the discipline with their recognition that reading is not establishing one "correct" interpretation of text (Chase & Hynd, 1987). Meaning is derived from the unique interaction between the content and structure of the author's text and the experience and prior knowledge of the reader. Reader response gives students the opportunity to respond with their interpretation, to relate ideas, and to make generalizations about literature and the literary experience.

PROGRAM EFFECTIVENESS

An evaluation plan designed to determine the impact of the literature component consisted of three instruments: a questionnaire; a comprehension subtest on a standardized test; and an analytical writing sample. The teacher-developed reading attitude questionnaire was administered to 281 students in grades two through eight. Results indicated that 78 percent prefer the novel over the basal or workbook, and 75 percent state that the novels helped them improve their reading. Despite these positive figures, only 49 percent of the students indicated that reading was their preferred class (even with the use of novels). Analysis of pre- and posttest scores on the Iowa Tests of Basic Skills showed a significant improvement in reading comprehension. Dramatic improvement was also noted in comparisons of pre and post writing samples based on analytical questions.

SPECIAL RESOURCES

Implementation of this program requires a wide collection of recognized children's literature and study guides.

SCHEDULING REQUIREMENTS

This program is a component of a regularly scheduled reading class.

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NOTES

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The Future Authors' Program

DEVELOPED BY: Theresa Mong

PROGRAM OVERVIEW

The Future Authors' Program encourages frequent writing in the context of a developmental, sequential approach to writing. The guiding philosophy of the program is that writing enables students to discover what they know; to build reading skills; to share ideas, information, and feelings with others; to organize their thoughts; to promote imagination; and to develop a viable mode for creative thinking.

At the beginning of the year, the children are given a long-term assignment to write a book that contains a cover, title page, table of contents, illustrations, and five chapters. The skills necessary for writing and completing their books are covered over the course of the year; and writing in daily journals serves as a vehicle from which students discover ideas for future stories and poems, as well as their book.

While students are encouraged to complete their books, this is not a requirement of the program. The process of learning how to write creatively and to communicate effectively are the most important goals. The ancillary rewards are the completed work, the sharing of the books with parents and other students at the annual Future Authors' Conference each spring, and the display of the finished work at the county library.

Over the course of the year, each student writes a book, meeting with the teacher to develop chapter ideas and on a one-to-one basis as needed with volunteer aides who work in the classrooms once a week.

PROGRAM OBJECTIVES

Students participating in the program will develop effective writing skills, maintain a daily personal writing journal, gain confidence and skill in using a word processor, create an original piece of literature, and increase their self-confidence and improve their self-image.

WHAT THE RESEARCH SAYS

In 1983, the Carnegie Foundation's study of secondary education urged schools nationwide to place greater emphasis on writing in their curriculum, arguing that, "The inability to write effectively is proving to be a material deficit in the lives of American students" (Maynard, 1985). Eric Morganthaler (1986), a staff reporter for the *Wall Street Journal* substantiates that conclusion, writing that, "The one thing we find virtually lacking is sound writing skills."

According to Dan Kirby and Tom Liner (1981), writing can and should be a normal part of the child's schooling, and it must be woven into the entire school curriculum. They state that, "some of the mistakes that teachers make in teaching writing are not providing kids with enough practice time and being too preoccupied with writing form." Maughan agrees, writing that, "The written work of the classroom loses much of its potential strength as a medium for learning because the teacher becomes unduly enmeshed in the complexities of its appraisal." Identifying a trusting, collaborative relationship between teacher and student as an impelling force for learning to write, Maughan urges teachers to establish ways and means for making the written work of the school day self-evaluative.

PROGRAM EFFECTIVENESS

The Iowa Test of Basic Skills and registered holistic scoring of student writing samples were used to evaluate students' progress in developing writing skills. The results indicated dramatic improvement in the quality of the writing samples although significant growth in language skills was not demonstrated.

Informal evaluation showed that 90 percent of the children completed the writing and assembly of a book and that there was a significant increase in the number of books read and book reports written by students.

SPECIAL RESOURCES

A parent volunteer or teacher aide to assist the students during the various stages of the writing process is helpful. Moreover, word processing equipment is useful although not essential.

SCHEDULING REQUIREMENTS

This program takes place as part of a regularly scheduled language arts class of at least 45 minutes.

FURTHER INFORMATION

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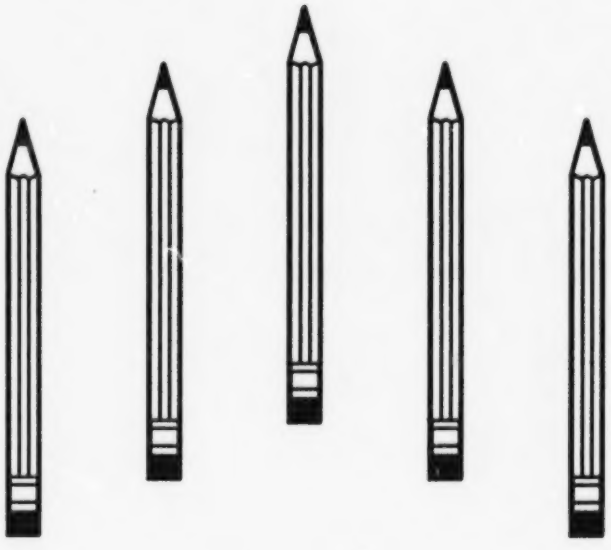

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Relevant Writing

DEVELOPED BY: James K. Flanagan

PROGRAM OVERVIEW

Relevant Writing is a structured, time-intensive approach to the teaching of writing especially geared to middle school learners. It involves students in exciting and significant activities that require energy, idealism, higher-level thinking skills, and, on occasion, a healthy measure of good-natured skepticism. The program succeeds because it is based on the assumption that students in this time of profound and dramatic (and sometimes overdramatized) change will measure everything we ask of them by the yardstick, "What does it have to do with me?"

Relevant Writing starts with the self, with self-examination and self-knowledge, and moves concentrically outward. At this stage, students write to satisfy the need to explore and confront this untimely center, expressing themselves in lyric poems, journals, autobiographies, family trees, and brief family histories.

In each of the next two stages, students engage in writing that is somewhat broader in social scope, writing responses to prompt letters in which fictitious, but believable, peers face crises and seek advice on such topics as loneliness, friendship, drugs, divorce, runaways, sex, and death. Students then proceed to build on the self-assessment work of the first two steps, writing self-assessments, wish lists, and descriptive essays in which they portray themselves as qualified for an imagined job, trade school, military, or college position. They also have a chance to write more for publication and for contact with the wider world: the school newspaper or literary magazine; world-famous individuals, requesting to include them in the school's Autograph Museum; newspaper editors; and government officials with suggestions for change.

In the fourth and final step, students return to the beginning to review the course of their writing, to see how they have progressed, and to write down reflections on what they have learned about themselves and others in the process. Both students and teachers adhere to a threefold assessment system which provides them with a clear sense of progress: the Writing Road Map, the road map of drafts and revisions that trace the writer's progress in a word-by-word, idea-by-idea way; Real World Results, the responses and reactions to letters and publications which indicate clearly and directly how effective they have been; and Meeting a Deadline, Making the Grade, fixed deadlines with passing zones wide enough to meet those marching to different drummers. Encouragement, pride, responsibility, and the competitive spirit conspire to make this an effective assessment/motivation practice.

PROGRAM OBJECTIVES

Relevant Writing aims to channel the energy and idealistic egocentricity of middle school students into writing activities that make them want to think and write more effectively and instills confidence in them about their writing through activities in which they develop awareness of the several roles that each of us is called to live.

WHAT THE RESEARCH SAYS

Relevant Writing is based on the premise that students should begin their writing by satisfying the great need for self-exploration. The use of freewriting, journals, and autobiography to attain this end is supported by the work in the last decade of Peter Elbow (1984), Donald Graves (1983), Lucy Caulkins (1986), Nancie Atwell (1987), and others.

At the same time, the design of the program reflects the belief that such writing can be produced only where the old adversarial approach to writing is replaced by one in which writing is viewed as a process in which the teacher/writer/editor assists the student/writer to achieve mutually developed goals (Elbow, 1984). Issues of grammar, spelling, and mechanics are addressed as needed to enhance effective writing rather than to produce it, which results in higher student involvement in learning, an end that John Goodlad (1984) considers essential for improving the quality of education.

The other major premise of *Relevant Writing* - that students develop a desire to accept the relatedness of their writing to the world beyond themselves - also has strong support in the literature. Boyer (1983) sees this as a logical step after concentration on the self: "Once young learners have become actively involved in the writing and reading of their own thoughts, they are ready to consider seriously the ideas and writing conventions of others" (p. 86). *Relevant Writing* thus sharpens reflective thinking skills as it deals with questions of social, ethical, and moral import.

PROGRAM EFFECTIVENESS

The program's effectiveness has been validated in a number of ways. The Emig-King Writing Attitude Scale administered to 83 students prior to and after participation in the course indicated significant and positive changes. Standardized testing on the California Test of Basic Skills (CTBS) showed dramatic improvement, as did registered holistic scoring of student essays. However, after all the numbers are crunched and the surveys are scanned for the umpteenth time, there is no scientific way, no absolute way to "prove" that *Relevant Writing* does what it set out to do. But, it is far from coincidental that so much good writing has suddenly appeared and that test scores are where you can sense the change even if you are too busy to sit and analyze it; *Relevant Writing* succeeds. The strongest evidence of its success is the students' response when you try to go back to the old ways when writing was rare and painful, and students were there to write what they were told. Sooner than you'd expect, you hear the prompting tones of wisdom from a 13-year-old, "When are we gonna get time to write? I got something on my mind I got to write down!"

SPECIAL RESOURCES

A school principal who understands and is committed to the teaching of writing as a process is absolutely essential. In terms of materials, *Relevant Writing* fits any classroom or teaching conditions, requiring only pencil, paper, blank book journal, and optional access to a typewriter. If the gods of the budget are kind, however, *Relevant Writing* works even more effectively with word processing in the classroom.

SCHEDULING REQUIREMENTS

This program is flexible and may be employed to the extent that it fits the teacher's curricular goals and personal style. It conforms best and most successfully to any curriculum that emphasizes the teaching of writing as a process.

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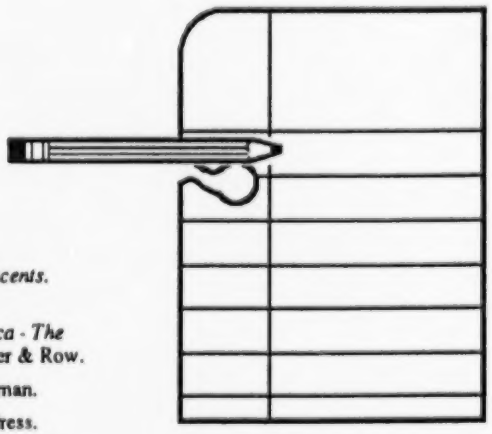

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Goodlad, J. (1984). *A place called school.* New York: McGraw-Hill Book Company.

Graves, D. H. (1983). *Writing: Teachers and children at work.* Portsmouth, NH: Heineman Educational Books.

A Continuous-Review Approach to Teaching Algebra

DEVELOPED BY: Thomas J. Smith

PROGRAM OVERVIEW

The main component of *A Continuous-Review Approach to Teaching Algebra* is a packet of 105 problem sets (daily homework exercises) designed to provide practice on both the given day's concept and a sample of concepts covered earlier in the course. The problem sets, which replace traditional (massed) textbook exercises, also include special items that are designed to interest and motivate students, as well as to develop and strengthen their problem-solving skills. These items may be presented as extra-credit problems, computer-related activities, or small-group brainstorming projects.

A typical lesson can be taught in a traditional manner, with a question and answer session on the previous night's homework; a teacher-led discussion of new material, including any advanced organizers that are prerequisites to understanding; closely-monitored seatwork; and the assigning of new homework exercises. However, when using these problem sets, the topics discussed on any given day are much more varied than those resulting from the traditional textbook exercises. Both instruction and homework are of a continuous-review nature.

PROGRAM OBJECTIVES

The main goals of the program are to increase student achievement in algebra and develop a more positive attitude toward learning mathematics. The problem sets are designed to follow the scope and sequence of the standard Algebra I course taught throughout the state at the ninth-grade level.

Although intended for use in a standard Algebra I course, the program could also be adapted for an advanced eighth-grade course or a "basic" algebra course at the ninth- or tenth-grade level.

WHAT THE RESEARCH SAYS

While the topics taught in an algebra course are hierarchically related and sequenced, some concepts tend to be more abstract, to seem less related than other concepts, and to need the reinforcement given the seemingly more-related concepts. Four research studies support the contention that a continuous-review approach is more effective than a traditional (massed) approach to learning and/or retaining algebra skills.

Urwiller (1971) reported results of the achievement, retention, and attitude of second-year algebra students which favored spiral homework assignments over traditional assignments; Butcher's (1975) research on ninth-grade algebra students showed more favorable effects for distributed problem assignments than for massed problem assignments; and Friesen's (1975) study of the effect of exploratory and review homework exercises upon achievement, retention, and attitudes in a first-year algebra course showed significant differences resulting from oblique homework organizational patterns as opposed to the more conventional (massed) approach. More recently, Reed (1983) compared an incremental, continuous-review approach to teaching algebra (using Saxon's textbook) with a conventional approach and found that the experimental group significantly outperformed the control group on tests of student achievement.

To provide students with the needed reinforcement, Saxon (1979, 1982) developed an algebra text that introduces topics incrementally and provides practice for every topic in each problem set. Nicely (1985) indicates, however, that most current mathematics teachers must supplement commercially available texts with other methods and materials in order to involve students in developing, practicing, and acquiring higher-order skills. *A Continuous-Review Approach to Teaching Algebra* draws from each of these research studies by providing problem sets that encourage higher-order thinking, as well as the necessary practice in the concepts of the standard Algebra I curriculum.

PROGRAM EFFECTIVENESS

The evaluation was conducted in four classes taught by four different teachers (not including the developer of the program materials). Two of the teachers each taught an experimental group section using continuous-review problem sets, and the other two teachers each taught one control section using massed homework exercises.

The treatment groups were compared on pretest algebra knowledge (using The Algebra Project Pretest) and overall achievement (using the departmental final examination). The pretest was administered in September, 1988. The posttest was administered, following treatment, in June, 1989. Eighty-five students participated in the study. A fixed-effects design, with both independent variables fixed, was used in the study. The teacher variable (consisting of two levels) was nested within the treatment dimension.

Prior to treatment, there were no significant differences between the experimental and control classes on The Algebra Pretest. Differences in achievement were compared using an analysis of variance. A difference in overall achievement (although not significant at the .05 level) was found favoring the experimental group of students (who had used the continuous-review approach) on the departmental final examination.

As indicated in an analysis of a student homework opinionnaire, the experimental group was more satisfied with the nature and variety of the homework assignments, less frustrated by them, and enjoyed the assignments more than the control group.

SPECIAL RESOURCES

No special resources beyond the teacher manual and the student materials developed by the grantee are needed to implement the program in other classes.

SCHEDULING REQUIREMENTS

This year-long Algebra I course is designed for implementation in five 40-minute periods per week.

FURTHER INFORMATION

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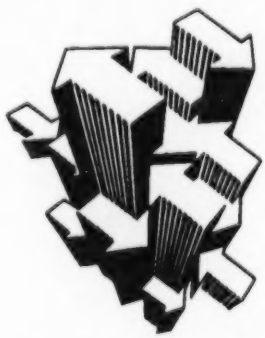
Principal: Dr. David Myers



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The Science Connection

DEVELOPED BY: Joseph DePuglio, Kate Sommerhalter-Napolitano, and Paul Pflaumer

PROGRAM OVERVIEW

The Science Connection was created to demonstrate through related activities and problem-solving investigations that what students are learning in science classes has application to the work that individuals are doing outside the classroom. The major objective, therefore, is to foster students' understanding of this relationship and thereby motivate them to regard science as relevant and valuable. Four 30-minute videotapes, as well as student lab-activity packets, teaching guides, answer keys, and test materials, have been developed and field tested for this program.

Through "Amusing Physics", students learn how basic physics concepts are used in the construction and operation of rides at an amusement park. Students learn how to do the necessary measurements needed to calculate the acceleration, g forces, centripetal force, work, and power of some of their favorite amusement park rides.

"Physics of Flight" shows students that the physics they are learning in school has direct application in aviation. Vectors, center of mass, and Newton's laws of motion are included.

In "Okeanos Whale Research: Watching the Whales", students are taken on a research vessel during a whale watching trip. In addition to learning about whales, students learn how observation, data recording, measurement, and mathematics are essential skills for biologists.

From "It's a Zoo Out There: Biology at the Zoo", students learn how the skills of observation, classification, measurement, and data collection are used at the Philadelphia Zoo.

The Science Connection, which is a supplement to existing biological science and physics courses, has been implemented with heterogeneous and homogeneous groups of students in grades seven through twelve in the original district.

PROGRAM OBJECTIVES

The primary objective of *The Science Connection* is for students to become aware that the concepts commonly presented in standard science curricula are relevant and vital to operations and activities in the "real" world.

WHAT THE RESEARCH SAYS

For the past decade, educators have deplored the lack of science awareness and interest among our students (Yager & Penick, 1985; Convocation of the National Academies of Sciences and Engineering on the State of Pre-College Education, 1982). Yager, Hofstein, and Lunetta (1981) state that, "classical didactic teaching characterizes most classrooms" and stress the need for science education to deal with the interaction of science and society. Hurd, Bybee, Kahle, and Yager (1980) report that today's instructional materials emphasize basic knowledge to the exclusion of practical application of this knowledge in everyday life. Wilbur (1986) concludes that "our science programs, especially goals and methods of instruction, are not meeting the needs and interests of today's high school students."

Students need to be made aware of what science really is and what the work of a scientist is really like. Adults who are actively engaged in science are an important resource (Yager, 1984) and could help to fulfill goals of science education (Harms & Kahle, 1981). "Scientists who have used textbook theories in their professional lives should be allowed to share that excitement, that vision, with students who might otherwise be guided by less knowledgeable teachers" (Gray, 1980). Uri Zoller (1985) writes about the need to change the focus of science instruction, "Rarely, can we spare the time or energy to teach a separate course in practical real-world science. Yet science education must be made relevant. To approach this in the classroom, we must approach real problems through inquiry and involvement."

In *Educating Americans for the 21st Century* (1983), the National Science Board Commission on Pre-College Education in Mathematics, Science and Technology presents ways in which the science curriculum needs to be changed. "New science curricula that incorporate appropriate scientific technological knowledge and are oriented toward practical issues are needed. These activities will also provide an excellent way of fostering traditional basic skills." The commission urges "the introduction of practical problems that require the collection of data, the communication of results and ideas and the formulation and testing of solutions or improvements...."

PROGRAM EFFECTIVENESS

Student achievement was assessed both prior to and after studying each of the units. Very few students (1 to 10 percent) showed mastery (as indicated by a score of 75 percent or higher) prior to study of the units. After study, the proportion of students achieving mastery varied from 66 to 86 percent.

SPECIAL RESOURCES

The units require video playback equipment in addition to the equipment and materials typically found in high school science laboratories (e.g., stop watches and meter sticks are needed in the physics units).

SCHEDULING REQUIREMENTS

Each of the four units requires one to two weeks of normally scheduled biological science or physics class periods. The units are designed to be used for whole class instruction with an average class size of 30 students.

FURTHER INFORMATION

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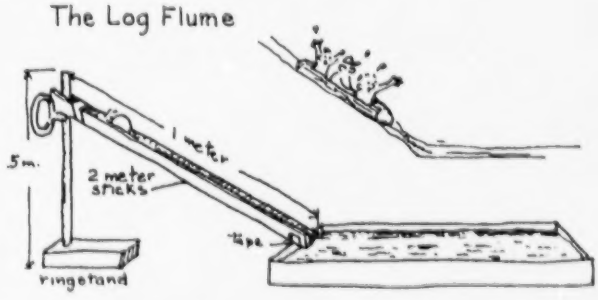

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C.L.A.S.S. (Corrective Language Arts in Social Studies)

DEVELOPED BY: James N. Nichols

PROGRAM OVERVIEW

C.L.A.S.S. provides an alternative method for improving New Jersey High School Proficiency Test (HSPT) communications skills without taking students out of required or desired courses for needed remediation. Tenth and eleventh graders failing the reading and/or writing portions of the HSPT are scheduled for special sections of United States History I or II. These classes provide instruction in American history, utilizing teacher-made activities designed to improve HSPT reading and writing skills, as well as to support content instruction.

The compensatory education teacher works in conjunction with the subject specialist in pre- and posttesting students, maintaining required records, and providing correction of written mechanical errors and other guidance in communication skills. All activities developed are specifically aligned to the HSPT skills and format without sacrifice of content material. Thus, the course provides a natural blend of communications skills with American history content.

PROGRAM OBJECTIVES

Both content and process objectives are a part of the *C.L.A.S.S.* curriculum. The content objectives are identical to those of any standard United States history course because *C.L.A.S.S.* is predominantly a course in U. S. history. What makes *C.L.A.S.S.* unique, however, is the infusion of the process objectives of the HSPT into the content lessons. There is, in a sense, a kind of "symbiotic" relationship between the two sets of objectives: United States history is an ideal vehicle for teaching HSPT reading and writing skills while the HSPT skill activities provide an excellent means for teaching social studies content. Student participants are expected to improve HSPT reading and writing skills and to increase their conceptual understanding of United States history, both qualitatively and quantitatively.

WHAT THE RESEARCH SAYS

C.L.A.S.S. is an application of research from three recent educational movements: "Reading in the Content Area" (Herber, 1970), "Writing Across the Curriculum" (Applebee et al., 1986), and "Writing as Process" (Britton et al., 1975; Emig, 1977, 1971; cited in Myers, 1984).

Herber's 1970 study resulted in the following findings:

- The most effective place to teach students content reading skills is in the content classroom.
- The reading needs of most students can be met in the regular classroom.
- Subject area teachers can provide reading instruction without jeopardizing the teaching of content.
- Properly utilized, content reading instruction will improve both communication skills and the learning of content.

The advent of the HSPT, which includes both multiple-choice and essay requirements in its writing assessment, generated tremendous interest in improving student writing in New Jersey. This interest parallelled concern about writing at the national level. Applebee's 1984 assessment of 55,000 American school children indicates that most students are unable to write adequately except in response to the simplest of tasks (1986). *The Writing Report Card* (Applebee, 1986) further identifies:

- The need to integrate reading and writing across the curriculum.
- Higher achievement levels in students who write three or more reports or essays in a six-week period.
- Better writing resulting from those students who engage in frequent planning, revising, and editing.
- Improved writing from students who learn strategies for thinking as they write.

Although different proponents of the writing as process movement apply different labels (Graser et al., 1983), most would agree that prewriting, drafting, revising, and editing are all necessary efforts in a well-developed essay. *C.L.A.S.S.* integrates the writing process into all writing projects and includes activities that reflect the 30-minute time constraint of the HSPT.

The link between communications skills and social studies is not a new consideration. *Social Education* (1978), the official Journal of the National Council of Social Studies, has devoted entire issues to the themes of reading and writing skills. Stein and Beyer (1982) encourage social studies teachers to capitalize on the needs and interests of adolescents. Conclusions that can be drawn from these two resources are that:

- Communications skills must be taught in the social studies to enable students to learn content efficiently.
- The social studies are particularly appropriate vehicles for integrating reading and writing skills.

PROGRAM EFFECTIVENESS

Evaluation of the program involved 34 students (15 reading, 19 writing). Since the purpose of the course was to improve student achievement as measured by the HSPT, this statewide proficiency test was used for pre- and post-treatment assessment. Results indicate that: 93% of the students who had previously failed the reading portion of the test passed it after participating in the course, and that 89.5% were successful on the writing section.

In addition, results of an attitudinal survey indicated positive student attitudes toward the *C.L.A.S.S.* materials and the program (versus pull-out or special classes).

SPECIAL RESOURCES

No special resources are required for this course.

SCHEDULING REQUIREMENTS

This program is a regularly scheduled high school United States history course requiring five class periods per week.

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NOTES

Applebee, A., et al. (1986). *The writing report card: Writing achievement in American schools.* Washington, DC: National Center for Educational Statistics, U.S. Department of Education.

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A Laboratory Approach to Teaching Social Studies

DEVELOPED BY: Jeri-Lynn Gatto

PROGRAM OVERVIEW

A Laboratory Approach to Teaching Social Studies is an applied American government curriculum designed for students in the eleventh and twelfth grades. The program utilizes original documents copied from the National Archives and the Library of Congress in an applied rather than a theoretical approach to the study of United States government. As part of the laboratory, students prepare for each "lab assignment" in the series of ten by reading secondary sources and then work through the labs, which are designed to acquaint students with the primary source documents. Each weekly lab applies directly to whatever topic of the traditional curriculum is being studied and complements coursework found in any standard high school text. For example, documents written by Congressman William Hughes (Second District, New Jersey) are used when studying the House of Representatives.

PROGRAM OBJECTIVES

At the completion of the course, students will evidence awareness of government activity at the local, state, and federal level; recognize the complexity of the system of checks and balances within the U.S. Constitution; demonstrate mastery of the traditional textbook theory taught in an American government curriculum; evidence an ability to formulate well-thought-out, supported opinions and decisions as an American citizen; and desire to seek out and read newspaper and magazine articles outside the context of the classroom. As a result of the program, students will also develop an understanding of the difference between a primary and a secondary source.

WHAT THE RESEARCH SAYS

It has been said that a fair teacher tells, a good teacher explains, an excellent teacher demonstrates, and a superb teacher inspires. *A Laboratory Approach to Teaching Social Studies* is an attempt to motivate students by providing a hands-on context in which they can discover the intricacies of theory and events reported in standard high school civics or government texts.

Jeffrey Fouts (1987) in research conducted at South Pacific University found that students' attitudes toward social studies are directly related to the classroom environment. He suggests that classrooms where students are actively involved in inquiry foster a healthy, competitive spirit, rapport, and exchange of ideas among students and between students and teachers; and they allow the students to focus successfully on the task at hand.

Lyle Smith (1984) suggests that the ineffective lecture method can be replaced with primary source material that comes from the teacher, whose function is no longer to impart knowledge, but rather to provide the raw materials which the students use to gain insights or knowledge on their own. Smith further indicates that by removing the vagueness variable often associated with verbal differences among teachers, the students grasp information with greater clarity and thus achieve higher levels of understanding.

Walter Parker (1987) in reviewing teaching styles makes some interesting observations of teachers as curriculum agents. His exploration of the complexities of teaching styles suggests that social studies teachers should rethink their approach and incorporate the techniques of natural science which require observations from the senses and allow for natural curiosity, inquiry, and conclusion by the student. *A Laboratory Approach to Teaching Social Studies* borrows, then, from scientific inquiry, allowing students to learn from their research of primary sources. Empowering the student to learn more today means allowing the responsibility for learning to be put on the student.

PROGRAM EFFECTIVENESS

Eighty college prep students, taking both the traditional curriculum and the lab approach, served as the experimental group; and a comparable group of eighty college prep students at the other high school in the district served as the control group. At the end of the semester, all students were administered a post-course departmental proficiency exam (with a passing score of 70) in order to provide a basis for comparing each group's knowledge of the mechanics of the U. S. government. The project group significantly outperformed ($t = 4.28$, $p < .05$) the control group, with a mean score of 83.77 for the project group as compared with the mean score of 75.86 for the control group.

Through self-report on surveys taken midway and at the end of the semester, the students in the project group indicated that they maintained their level of outside reading (newspapers, magazines, etc.) related to government, while the students in the control group showed a significant decline. This suggests that the project encouraged students to maintain their level of involvement outside the classroom while the traditional course tended to stem the need and/or desire to read materials outside the context of the course.

SPECIAL RESOURCES

The greatest need is to plan ahead to allow sufficient time to request necessary and relevant secondary source materials from the library. Those materials not found in the high school library should be ordered on interlibrary loan. Cooperation is essential so that the school librarian can collect and maintain reference materials relating to government in reserve files.

SCHEDULING REQUIREMENTS

One weekly lesson, as part of the scheduled social studies class, is devoted to the lab during which the class is divided into small groups.

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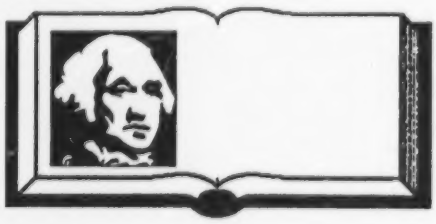

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Psychology Field Work

DEVELOPED BY: Steven Schiffman

PROGRAM OVERVIEW

Psychology Field Work, an academic/community service program developed for seniors who have successfully completed a general psychology course, is designed to give students practical field experience in local social, educational, residential, or psychiatric facilities. Under professional supervision, students work with clients, providing a variety of important human services that range from recreation to education to simple social interaction.

Each year, ten to sixteen students are placed in facilities such as psychiatric hospitals, nursing homes, child care centers, and rehabilitation homes. The students offer their services to the facility for a minimum of three hours of work per week for one school semester. In addition, the students attend weekly seminars with other field work students to share their experiences.

The students must keep accurate records of their experiences and do research in a related area of study. Upon satisfactory completion of course requirements, the students receive 2.5 academic credits. This elective course is available to seniors only, and successful completion of the school's general psychology course is a prerequisite.

PROGRAM OBJECTIVES

Students who participate in the program will improve their self-image and self-worth while providing community assistance to appropriate health, social, education, or family services. They will further develop their oral, research, writing, and social learning skills. In addition, the concepts, theories, ideas, and approaches learned in the introductory psychology course are reinforced.

WHAT THE RESEARCH SAYS

Many educators recognize the value of field service education. Shumer (1988), for example, believes that by linking schools with their communities, a rarely used source of knowledge is tapped. Through these activities, students can relate service to learning. "They can come to understand that service is part of citizenship in a society that reveres participatory forms of government" (Shumer, 1988).

Ernest Boyer, President of the Carnegie Foundation for the Advancement of Teaching, advises that service programs in the school be well-planned, tightly administered, and carefully critiqued. He suggests, "Community service should not be viewed merely as a sentimental undertaking" (in Lewis, 1987). Schools must draw a distinction between program goals that "expose" students to human needs and those that "engage" them. Shumer (1988) reiterates that point of view: "Sound programs are an integral part of the educational program, not an add-on activity that occurs only after school or during the summer; some form of academic credit is usually awarded for the learning derived from the service activities" (p. 28). Shumer feels that these programs should "give students responsibility through activities in which there are consequences contingent upon their performance." He further states, "Through guided involvement, students can feel the effects of poverty, see true human need, and understand the impact of their service" (p. 29).

Lestina (1987) believes that community services programs can be vital to a high school psychology program. "It has been said many times that actions speak louder than words. This is especially true in behavioral science, where experiencing behavior other than the ordinary classroom activity, can reinforce the concepts being taught. Because of my belief in expanding psychology outside of the classroom, I suggest that students, where possible, become involved in a community service project or practicum" (p. 8).

Allan Luks (1988) has studied the mental and physical benefits of volunteering; and his finding, while focused on research with adults, may also be applicable to youth. Luks says that volunteering appears to relieve stress-related disorders such as headaches, and that subjects report an identifiable physical sensation during the actual helping. He also indicates that following the helping, many subjects report experiencing a greater calmness and enhanced self-worth.

An editorial in *America* (1984) states, "Youth service programs are a case in which the voluntary element is indispensable because no one can be compelled to learn altruism" (p. 42).

PROGRAM EFFECTIVENESS

Evidence that students gained insight and sensitivity was clearly indicated through the field site supervisor reports. Final evaluations showed substantial gains in thoughtfulness and sensitivity. In addition, ten out of eleven parents concurred that their children were more sensitive to the needs of others as a result of this program. Four of the six directors of field sites specifically mentioned that the program bred sensitivity.

Another change in the students occurred in their social learning skills. Evidence that students strengthened these skills was acquired through the supervisor reports, parent questionnaires, and student journal entries. Supervisors reported the largest gains in this one of eight social skill areas targeted, and results from parent questionnaires support these findings. Eighty-eight percent of the parents agreed that their children were more adaptive in social situations and more cooperative, and that they had developed a better rapport with others as a result of their participation in this program.

Student development in the areas of personal growth, self-esteem, and confidence were measured through student and parent questionnaires, supervisor reports, and student journal entries. Students had high expectations regarding these areas, but consistently high scores on the post-program questionnaire suggest that their expectations were met. All parents agreed that the program had further developed some of their child's personal characteristics, and supervisor reports indicated gains in all of these areas. Student journals, however, appear to offer the most incisive examples of personal growth, increased self-esteem, and confidence.

SPECIAL RESOURCES

Students are responsible for finding their own means of transportation in order to participate in their field experience with a social service agency.

SCHEDULING REQUIREMENTS

This is a one-semester course for which students are required to complete 42.5 hours of field service. They may fulfill this requirement by working after school, at night, or on weekends.

FURTHER INFORMATION

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NOTES

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Resolving Conflicts in the Elementary Classroom

DEVELOPED BY: Naomi Drew and Gail Siggelakis

PROGRAM OVERVIEW

Resolving Conflicts in the Elementary School Classroom was developed with a long-range goal to prepare children for future positive human relations and a short-range goal to assist teachers with students' conflicts and low self-esteem. The program materials consist of 12 weekly lessons tailored for elementary students in grades K-5 and include a "how to" section giving teachers a basic background of the theory of positive discipline and tips on the successful implementation of conflict resolution. The 30- to 45-minute lessons are teacher-friendly and utilize standard classroom supplies.

This program, which aligns naturally with social studies, language arts, and family life objectives, provides lessons to develop problem-solving and communication skills and a variety of supplemental activities, including drawing, journal writing, collage-making, and role playing, to reinforce concepts. The accompanying packet of materials includes a reinforcement/enrichment section with ideas and suggestions that enable teachers to continue teaching the skills and concepts presented throughout the year.

PROGRAM OBJECTIVES

Participation in this program should result in the following outcomes:

1. Children will work in an atmosphere of mutual respect and harmony;
2. Children will have fewer conflicts and will develop skills to resolve conflicts that do arise;
3. Children will communicate more effectively; and
4. Children's self-esteem will improve.

WHAT THE RESEARCH SAYS

Conflict and violence have become an increasingly alarming problem in our schools. Ziglar (1988) explains that, "...in 1940 the top offenses in public schools were as follows: running in the hallways, chewing gum, wearing improper clothing, making noise, and not putting paper in the wastebaskets. In 1980, the top offenses in public schools were: robbery, assault, personal theft, burglary, drug abuse, carrying weapons..." (p.46).

To address this problem, thousands of teachers across the country ha ? trained in the use of conflict resolution techniques. Mundell (1988) documents this trend, stating that "Mediation and negotiation have become watchwords for many U.S. educators. With school violence on the rise, teachers are turning to innovative ways to maintain classroom harmony" (p. 5). In fact, the field of conflict resolution in education has become so important that *Educational Leadership* devoted its entire December-January, 1988 issue to this subject and its ramification for children.

William Kreidler, a Boston teacher and author of *Creative Conflict Resolutions* says peacemaking skills give kids a framework and that children like conflict resolution because they see the fairness in the process and begin to realize that they can resolve conflicts in a peaceful way (Mundell, 1988, pp. 5-6). Koch and Miller (1987) explain that conflict resolution works because students begin the process with a lot of personal discomfort they want to get rid of, the process offers all parties the opportunity to find a solution without losing face, and each invests a great deal of effort in finding a solution. "Research indicates that mediated agreements endure" (Koch and Miller, 1987, p. 60). In her article, "Mediator Magic", Peggy Cahoon notes that many schools around the country have begun to implement conflict resolution programs which help children work out disputes using "their heads and hearts, not their hands" (1988, p. 93).

Roderick (1988) details the positive results of these programs, noting the "perceptible improvements in general student behavior, transformation of some problem students, reduction of suspensions, improved school climate, and increased faculty morale" (p. 90). As Purkey (1970) says in *Self-Concept and School Achievement*, "...when students feel that teachers value and respect them, they are likely to value and respect themselves" (p. 52).

PROGRAM EFFECTIVENESS

This program was evaluated using a variety of instruments. Results of the pre- and post-treatment Inferred Self-Concept Scale (Western Psychological Service) indicate a significant increase in the students' self-concepts.

Three informal test instruments, the Conflict Resolution Survey, children's self-evaluations, and a parent survey, also showed an increase in students' ability to resolve their conflicts and choose more positive means to deal with differences.

SPECIAL RESOURCES

No special physical resources are needed to implement this program. However, teacher belief in the theory is imperative, and training in positive discipline strategies is very helpful.

SCHEDULING REQUIREMENTS

The program is designed to be infused in the classroom one period each week throughout the school year.

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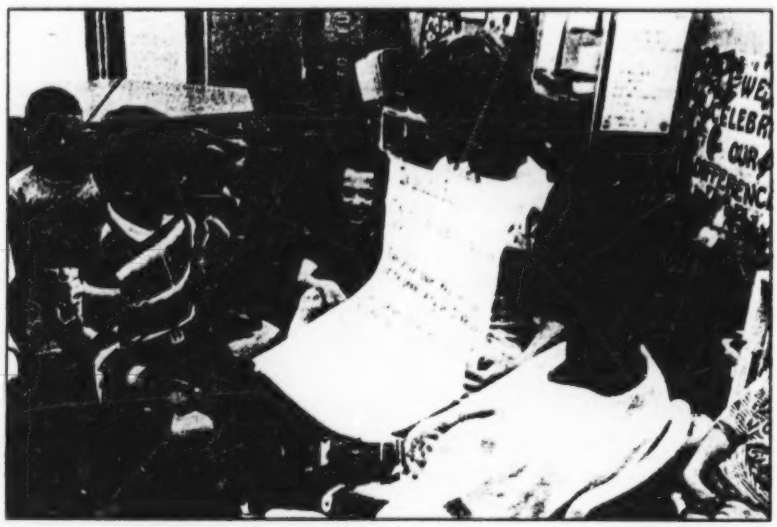

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Student Organization and Responsibility (SOAR)

DEVELOPED BY: Barbara J. Mahoney

PROGRAM OVERVIEW

Most often a student's poor scholastic performance is due not to inability, but to lack of organization, poor work habits, insufficient material support, or confusion about goals. The *SOAR* program, which is designed to instill positive learning behaviors, promotes student organization and responsibility by creating a structured classroom setting, establishing positive behaviors, and providing students with concrete procedures for organizing themselves, as well as consistent teacher expectations of student responsibilities.

Components of the program include: a storage system for student work and supplies; classroom guidelines which detail specific rules and expectations; communication techniques for parents and students; methods for students' recording of responsibilities and for the teacher's daily monitoring; precise procedures for completing long-term projects and daily assignments; consistent verbal instructions and responses; and reinforcement of desired behaviors.

PROGRAM OBJECTIVES

The instructional objective of the *SOAR* program is to increase student display of positive, responsible learning behaviors. To achieve this goal, students will prepare and complete assignments on time and with care and pride, follow directions, be prepared for class, maintain an orderly work station, be attentive in class, be responsible for work missed due to absence, keep parents informed of school matters, and accurately assess their own progress and teacher expectations.

WHAT THE RESEARCH SAYS

It is the responsibility of every classroom teacher to provide the best possible educational environment for motivating students. The teacher's best efforts, however, are often diminished by students who, in spite of their desire to do well, lack the skills to channel this desire into successful academic performance. Etzioni (1983) comments that half the families today send children to school who cannot accept rules and who do not know how to settle down to work. If schools are to educate students, they must teach them to concentrate and complete a task.

Teachers across the nation have expressed concern about developing responsibility in students as both a means for boosting academic performance and an effective approach for preventing classroom disruption (Levin, 1979). Prince (1980) writes that in order to bring out the best in their students, teachers must "be responsible for teaching responsibility." Organization is another basic consideration and a necessary part of any comprehensive approach to classroom management. Good and Brophy (1982) caution that functioning classrooms do not simply happen; rather, "they result from teacher efforts to create, maintain, and occasionally restore conditions that foster effective learning (Davis, 1985).

It is through routines and rules established from the first day of school that students best understand what is expected of them. Precise techniques and learning behaviors must be presented, and children must be afforded the materials and monitored instruction for implementing them. This is a complex process requiring that teachers clearly define their expectations and identify appropriate student behaviors, translate these expectations into outlines and guidelines, and communicate these procedures to the students (Davis, 1985). With consistent adherence to such guidelines, children can indeed be taught to be responsible and organized.

PROGRAM EFFECTIVENESS

Over a three-year period, 313 students were evaluated using a Teacher Evaluation Form, an instrument designed to measure student progress in achieving the program's objectives. Students showed some progress after participating in the program for one year. However, it took students two years in the program to exhibit all of the desired behaviors.

SPECIAL RESOURCES

Implementation of this program does not require special resources.

SCHEDULING REQUIREMENTS

SOAR is a comprehensive classroom management program that is in place throughout the school year and infused into the daily curriculum.

FURTHER INFORMATION

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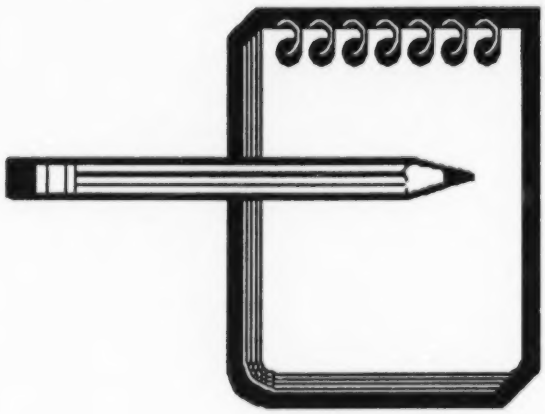

NOTES

Davis, E. (1985). *A manual for the development of classroom management skills.* Trenton, NJ: NJ Department of Education.

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Good, T., & Brophy, J. (1983). *Looking in Classrooms* (2nd edition).

Levin, M. (1979). *Developing responsibility: A practical approach for preventing classroom disruption.* West Orange, NJ: EIC Conference Reporter.

Prince, D. (1980, February). Responsibility: Discipline inside-out. *Middle School Journal*, 8-9.

Governor's Teacher Grant Recipients 1988

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Bagish, Elizabeth	10
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DePuglio, Joseph	32
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Gainer, Jo Ann	6
Gatto, Jeri-Lynn	36
Goodstein, Robert J.	22
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Following is a listing of New Jersey teachers and programs awarded New Jersey Governor's Teacher Grants in 1987. These programs, disseminated in 1989, are available through the district in which they were implemented. Individuals interested in finding out more about a particular program should contact the district directly.

Governor's Teacher Grant Recipients 1987

Programs	Recipients	Districts
Drama and Music		
Theatreworks	Dohrmann, Diana	Willingboro
MAGICC: Music Activities for Growth in Creativity and Cooperation	Baloche, Lynda	Evesham
Music and Computers	Stefany, Paul	Livingston
Reading and Writing/Language Arts		
Building Bridges: Teachers and Parents Together	Dioguardi, Teresa Baker, Isabelle Coopersmith, Regina	Montclair
Story Lunch Read-Aloud Program	Sherman, Louise	Leonia
Read at Home	Foulks, Dorothy	Rahway
Project F.I.E.L.D.	Augustine, Lillian Benus, Joan Briscesse, Blanca	Perth Amboy
Words: From Rags to Riches	Sahwell, Alida Marie	Closter
Building Communities of Readers and Writers	Stampa, Lynn Ziegler, Edith Klika, James	Closter
Me, Myself, and I	Bloom, Shelly	E. Brunswick
Playwrite	Amodeo, Janis	Montville
Literacy Polish	Longo, Alfred P.	Holmdel
Writing Competency Program	Kahn, Robin Littman, Linda Jacobs, Richard	Monmouth Regional High School
Teaching Reading and Writing Skills through Selected Adolescent Literature	Donnelly, Susan Wovna, Gail	Matawan-Aberdeen
Students and Teaches	Kugelmeyer, Sally	Warren
Writing Across the Curriculum	Goldberg, Sheila Moyer, Frank Kosa, Maureen	Hills Regional

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Programs	Recipients	Districts
Science		
The HELPS Program	Mollenhauer, Erik Porreca, Kathy	W. Deptford
Biopsychology	Marchioni, Warren	Montclair
Contemporary Science	Truex, Ron	Ocean
Social Sciences		
Spirit of America	Augis, James	Bound Brook
Up, Up and Away	Quackenboss, Elizabeth	Marlboro
World at Risk	Egbert, Jon	Berlin Boro
Crossing the Lines to DHCLV	McCrohan, Rose Ann Napoleon, Nick	Freehold
A Museum Program	Shamy, Robert G.	Monroe
Social Skills/Special Education		
Children in Crisis	Kramer, Miriam	Closter
We're Banking On It	Lougee, Sondra	Wood-Ridge
Math Problem Solving Using Using Both Right and Left Hemispheres of the Brain	Pizzi, Geraldine	Toms River
A Comprehensive Grade Level Discipline Program Based on Assertive Discipline	Sobrinski, Jeffrey Marine, Robert	Dennis
Educational Improvement Program (E.I.P.)	Gaona, Arlene	Wall
Study Skills		
S.O.L.	Goss, Margaret Hollema, Harriet Hagen, Lorraine Mittleman, Sondra	Allendale
Technology		
Integrating Technology to Create Multi-Media Classrooms	Anderson, Glenn	Toms River Regional

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Programs	Recipients	Districts
Art, Drama, and Music		
The Art C.A.R.T. Program	Ullom, Madeline	Gloucester
E.S.L.		
Color-coded Sentence Builder	Campbell, Barbara Ruth	Westfield
English as a Second Language Program	Anderson, Jacquetta Miller, Mary	East Windsor Regional
Mathematics		
Classroom Strategies for Problem Solving across the Mathematics Curriculm	Bjerklie, Margaret Jo Hornish, Donna Magda Perry, Patricia	Westfield
Reading and Writing Language Arts		
Brain Compatible Learning Environment	Meara, Philip	East Windsor Regional
Computer-assisted Writing Project	Breslin, Mary Fahey, Patricia Magill, Leah	Ocean Township
Creative Computer Writing	Primiano, Rosalina	Wayne Township
Critical TV Viewing	Stanley, Edward	Red Bank Borough
The Forrestdale Writing Program	Murdoch, Carol	Rumson Borough
The Literary Jackdaw	Johnston, Christine	Bridgeton
The Lone Reader	Dick, Marcia	Paramus
Motivating Writing	Berberich, Robert Van de Sande, Nancy	Rumson-Fair Haven Reg.
Move Over, Dr. Seuss! Here Come New Jersey's Teen Authors	Richter, Alice	Marlboro Township
Planned Activity Center Education	Pecci, Mary Ann	Neptune Township
Prescription for Better Writing	Goodson, Veronica McCart, Constance	Lower Camden Cty. Gateway Regional

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Programs	Recipients	Districts
Project W.O.W. (Write on: Wonderful)	Evans, Thomas Thomas, Felyce	Oakland
Reading and Writing Connections Across the Curriculum	Marino, Marianne	Glen Rock
Take Home Learning Games	Zaorski, Agnes	Eatontown
Writing: Strategies for All Teachers	Polyak, Christine Toth, Carol	Edison Township
Science		
Physics Data Acquisition and Dissemination	Bump, Wayne Greco, Wayne Mathie, Alexander	Millville
Science and Computers	Cusumano, Joan	Manalapan-Englishtown Reg.
Social Sciences		
Student Motivation in the Social Studies	McGlone, Julianne	Shamong Township
Social Skills/Special Education		
Human Behavior	Mackie, Daniel	Cherry Hill Township
Utilizing Chess to Promote Self-esteem in Perceptually Impaired Students	Levy, William	Hopatcong Borough
Spanish		
La Practice Hace Al Maestro	Raquet, Donna	Mahwah Township
Technology		
AP Computer Science	Haller, Ann	Bernardsville Borough
Computer Applications and the Neat Things We Do!	Richard, Joyce	Haddonfield Borough
Computers as Open-minded Tools for Learning and Problem Solving	Mahr, Donna	Ridgewood Village
Project Tool/Chest	Connell, Mary Ann Oziel, Elinor Rebarber, Ellen Schweitzer, Harriet Zullinger, Margaret	Highland Park